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ABSTRACT

This guide for teaching a course to prepare emergency medical service (EMS) trainers focuses on the skills necessary to present any of the Department of Transportation (DOT), National Highway Traffic Safety Administration (NHTSA) EMS courses. Course topics are as follows: (1) introduction; (2) instructor roles and responsibilities; (3) legal issues; (4) the adult learner; (5) creating an effective learning environment; (6) objectives; (7) evaluation; (8) instructional strategies and methods; (9) media; and (10) lesson plan development. The instructor guide includes course goals and course topics. It is organized in a two-page format, side-by-side, in which the left page contains instructor notes and a lesson plan outline, and the right page provides additional information on the topics. Transparencies also are included in the lessons. A set of 10 sample lessons to be taught also is included. Four appendixes contain the following: (1) complete instructions for the instructor and materials to be distributed; (2) references; (3) information resources; and (4) current curriculum titles and order information available from DOT/NHTSA. A student guide contains similar materials for student use. (KC)

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ED 425 307

# EMS Instructor Training Program
# National Standard Curriculum
# Instructor Guide
# Student Guide

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# EMS Instructor Training Program

## National Standard Curriculum Instructor Guide

U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

**NHTSA**
**People Saving People**

# PRINT APPROVAL ABSTRACT

## *Emergency Medical Services Instructor Training Program:*

## *National Standard Curriculum*

NHTSA has assumed the responsibility for the development of training courses. In order for DOT curricula to meet the needs of the constituency it must serve, curricula must be accurate and current. Recognizing the lack of standardization and the limited background of EMS instructors, NHTSA produced in 1986 the first edition of its *Emergency Medical Service Instructor Training Program*. NHTSA has now completed a revision of the 1986 curriculum. The new curriculum focuses on strategies for teaching assessment based curricula and ensures that modern curriculum development and adult education principles are utilized.

We welcome your comments and suggestions. Please direct them to:

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# FOREWORD

The National Highway Traffic Safety Administration (NHTSA) has played a critical role in the establishment of national standards for improving the management and delivery of Emergency Medical Services (EMS) in the United States. Thanks to NHTSA's leadership, significant improvements in EMS legislation, funding, and State and local management have been made. One of NHTSA's most important contributions has been the establishment of national standards for training.

In this capacity, NHTSA assumes responsibility for both developing and revising training programs to insure they are responsive to the standards established by the Highway Safety Act of 1966 (amended). NHTSA also intends that these courses be of the highest quality, be based upon the most up-to-date technical information, and include proven, yet innovative, instructional strategies.

To this end, NHTSA supported the revision of the 1986 Instructor Training Program. In States where instructor certification is required, NHTSA is hopeful that this course will meet and exceed certification requirements.

The success of any course depends substantially on the caliber of the instructors delivering the training. This underlines the critical role the Instructor Training Program plays in the overall curriculum.

NHTSA wishes to thank Analysis & Technology, Inc. (A&T) for their coordination of this project.

NHTSA also acknowledges each individual in the Curriculum Development Group (CDG) for their invaluable assistance in the development and review of these materials. As representatives of prominent EMS organizations, the significance of the input from the following CDG participants cannot be underestimated:

Dr. Thomas Blackwell, National Association of EMS Physicians
Mr. Phil Dickison, National Registry of EMTs
Ms. Gail Dubs, National Council of State EMS Training Coordinators
Ms. Deborah Henderson, National EMSC Resource Alliance
Mr. Patrick Moore, National Association of Emergency Medical Technicians
Ms. Ruth Oates-Graham, National Association of State EMS Directors.

# TABLE OF CONTENTS

| Topic | Page |
|---|---|
| Course Goals | 1 |
| Instructor Guide Information | 5 |
| Guidelines for Instruction | 8 |
| Overview of Course Activities | 11 |
| References | 13 |
| Course Materials | 13 |
| Student Evaluation | 14 |
| Program Evaluation | 16 |
| Introduction | 1-1 |
| Instructor Roles and Responsibilities | 2-1 |
| Legal Implications | 3-1 |
| The Adult Learner | 4-1 |
| Creating an Effective Educational Environment | 5-1 |
| Objectives | 6-1 |
| Evaluation | 7-1 |
| Instructional Strategies and Methods | 8-1 |
| Design and Use of Media | 9-1 |
| Lesson Plan Development | 10-1 |
| Final Presentations | |

# APPENDICES

| | | |
|---|---|---|
| Activity Materials | Appendix A | A-1 |
| References | Appendix B | B-1 |
| Information Resources | Appendix C | C-1 |
| DOT/NHTSA Curricula | Appendix D | D-1 |

This publication is distributed by the U.S. Department of Transportation (DOT), National Highway Traffic Safety Administration (NHTSA), in the interest of information exchange. The opinions, findings, and conclusions expressed in this publication are those of the author(s) and not necessarily those of NHTSA/DOT. The United States Government assumes no liability for its contents or use thereof. If trade or manufacturer's names or products are mentioned, it is only because they are considered essential to the objectives of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

## Introduction

The *EMS Instructor Training Program: National Standard Curriculum* focuses on those skills necessary to successfully present any of the DOT NHTSA EMS courses. The course provides a solid foundation in learning theory, yet moves directly into hands-on application. With the emphasis on practical skill development, Instructor Trainees will complete the course with the confidence that they can successfully teach any course in the National Standard Curricula for which they are technically qualified.

The course is designed as a series of interactive lessons, facilitated by you, the instructor. This Instructor Guide contains the information you will need to teach the course. A Course Guide, which contains information and materials necessary for course administration, and the Student Guide complete the curriculum package.

The course is presented using transparencies, a flipchart, and other support materials (see the Course Materials section). Participants follow along and take notes using the accompanying Student Guide. Included throughout the course are group discussions, individual exercises, and scenario-based roleplays that allow participants to apply their developing instructor skills.

***NOTE: Many activities will require pre-class preparation of materials. Additionally, each lesson begins with a presentation of the Lesson Objectives, using a flipchart page prepared before class.***

The information that follows will familiarize you with the structure of the course, explain the teaching strategies that may be used, and inform you of preparations that you should make prior to teaching the course.

## Course Goals

At the completion of this course, the participants will be able to:

- Organize and prepare curriculum materials for presentation
- Effectively deliver each lesson contained in the curriculum, as measured by overall student performance on training objectives
- Prepare instructional aids which will increase the effectiveness of the training

- Ensure that all necessary equipment and materials necessary for student learning are present and operational
- Evaluate student performance and provide corrective feedback to improve subsequent performance
- Provide a mechanism for evaluating the training program's effectiveness
- Obtain the appropriate curriculum package developed by NHTSA

Specific objectives for each lesson in the Instructor Training course are listed in the Overview section at the beginning of each lesson in both the Instructor Guide and the Student Guide.

## Course Topics

1. **Introduction**

    - Introductory Remarks
    - Lesson Objectives
    - Course Schedule
    - Administrative Details
    - Course Objectives
    - Course Expectations

2. **Instructor Roles and Responsibilities**

    - Introduction to Various Roles
    - Problem Students and Challenging Situations
    - Positive, Constructive, and Corrective Feedback
    - Team Teaching Guidelines
    - Instructor Attributes

3. **Legal Issues**

- Harassment
- Discrimination
- Americans with Disabilities Act of 1992 (ADA)
- Confidentiality
- Negligence
- Occupational Health and Safety Act (OSHA)

4. **The Adult Learner**

- Learning Theory
- Characteristics of Adult Learners
- Learning Styles
- Skills for Success

5. **Creating an Effective Learning Environment**

- Assess Your Audience
- Assess the Physical Environment
- Room Setup
- Classroom Management

6. **Objectives**

- Overview of Training Design and Development
- Preparing to Teach Existing Curriculum
- Learning Objectives
- Learning Domains
- Writing Useful Objectives
- Getting Started—Determine Your Lesson Objectives

7. **Evaluation**

- Purposes of Evaluation
- Evaluation Instrument Development Principles
- Cognitive Test Item Development
- Affective and Psychomotor Test Item Development
- Getting Started—Create Your Evaluation Instrument(s)

### 8. Instructional Strategies and Methods

- Parts of Instruction
- Teaching Methods
- Getting Started—Decide on Your Methods
- Communication and Presentation Skills
- Questioning Techniques

### 9. Media

- Media Selection
- Instructional Value of Media
- Principles of Design
- Teaching Aids—Prepared and Spontaneous
- Getting Started—Create Your Own Teaching Aid(s)

### 10. Lesson Plan Development

- Overview
- Components
- Examples of Lesson Plans
- Getting Started—Develop Your Lesson Plan

### Putting It All Together—Final Presentations

- Final Presentations
- Peer/Instructor Feedback and Evaluation of Presentations
- Review of Course Objectives
- Course Evaluation

## Instructor Guide Information

This Instructor Guide has been developed to assist you in presenting the course material. Each lesson contains introductory and summarizing material, as well as detailed lesson plans, instructional content, requirements, and guidance for teaching each lesson. The list that follows explains certain features of the Instructor Guide.

- **Format**

  The Instructor Guide is organized in a two-page format, side-by-side, in which the left page and the right page serve different purposes. The left page provides you with everything you need to teach the lesson, in the form of Instructor Notes and the Lesson Plan outline.

  The right page provides Additional Information, designed to be read before class. It precisely parallels the left page outline, and supplies in-depth information on each topic introduced.

- **Instructor Notes**

  The Instructor Notes column provides teaching suggestions, prompts for using support materials, activity references, and hints for facilitating discussions. Do not be put off by the rudimentary nature of some of these notes; they are designed to assist even the most novice instructor to prepare and present the lesson effectively. For example, questions have been included throughout each lesson. It is expected that as experienced instructors read through the lesson before class, they will generate additional and replacement questions, thus creating their own, customized instructor notes. The more this Instructor Guide becomes your own working presentation tool, the more it has achieved it's intended purpose.

- **Additional Information**

  The additional information provides sufficient background knowledge so that even if an instructor is unfamiliar with a particular topic, no additional research is necessary to teach. For those who would like to pursue course topics further, sources are cited at the end of each lesson, as *References*. *Additional Resources*, though not direct sources, relate to the subject matter and have been compiled for your convenience.

- **Icons**

Throughout this Guide you will see the following icons:

The clock icon appears at the beginning of each lesson. Time frames are given suggesting about how long it takes to present the lesson and how long to allow for activities.

This icon prompts you to ask a question. When applicable, answers to the question will appear in italics.

This icon alerts you that there is a corresponding transparency for this material. Transparencies are numbered by lesson and sequence; e.g. Display Overhead #4-5 refers to the fifth transparency in lesson four. A reduced version of the overhead appears in the Lesson Plan outline.

This icon signals the use of a flipchart. Be sure to label the flipchart with the topic listed in the instructor notes.

This icon tells you to conduct an activity at this time. The Instructor Notes, Lesson Plan outline, and Additional Information contain most of the information you will need to conduct an activity. Additional materials for each activity are provided in Appendix A as needed.

The handout icon prompts you to distribute a handout. Check the Instructor Notes for details regarding where the handouts are located in the Instructor Guide. Reproduce sufficient copies prior to class.

- **Transparencies**

  A paper copy of each transparency is located at the end of the lesson. These pages can be used to confirm that you have a copy of each transparency and help you to organize the overheads prior to class.

- **Appendices**

  A Table of Contents is included for Appendix A, Activity Materials and B, References.

  Appendix A is the only appendix in the curriculum that differs in the Instructor and the Student Guide. The Instructor Guide version of Appendix A contains complete instructions for the instructor and materials to be distributed. These require reproduction or preparation before class.

  Appendix B is comprised of references that are used during many of the course activities and may serve as Job Aids after the course as well. Please take a moment to familiarize yourself with these important resources.

  Appendix C is a list of Information Resources. Appendix D furnishes the most current curricula and ordering information available from DOT/NHTSA.

## Guidelines for Instruction

This course is designed to be interactive at all times. Instructional strategies and methods that will encourage student involvement are provided in Lesson 8. Please review this lesson thoroughly before teaching the course.

- **Room Configuration**

  The instructor should arrange the classroom in a manner that will increase the interactivity and informality of the discussions. Suggested seating configurations include sitting in a semi-circle, around a large conference table, or around several smaller tables. Throughout the course, there are opportunities to leave your position as a stand-up facilitator, and join the seating configuration of the class. Suggested room arrangements and the potential benefits of each can be found in Lesson 5, Creating an Effective Learning Environment.

- **Questioning Techniques**

  The effective use of questioning is a primary means to create a participatory learning environment. Instructors are expected to direct questions to the participants at the beginning, throughout, and at the end of each lesson. The instructor will use the answers provided by the participants to initiate and guide each lecture period. The impact of effective questioning on learning cannot be underestimated; a section has been devoted to the various techniques and expected outcomes in Lesson 8.

- **Exercises and Discussions**

  Exercises and discussions are used throughout the course to reinforce knowledge and practice the skills expressed in the learning objectives. Specific information about how to conduct these learning events is given in the next section, Overview of Course Activities, and/or in the Instructor Notes as part of the Lesson Plan. Materials necessary to conduct the exercises and more complete instructions, if necessary, are located in Activity Materials, Appendix A.

## Overhead Transparency/Flipchart Use

In this course, the frequent use of discussion as a training method requires you, the instructor, to document much of what is said. In addition to reinforcing key points, this also gives you the opportunity to cull out inaccurate information. Students who are taking notes tend to record only what you have documented.

Either the overhead or the flipchart can be used for this purpose. The flipchart has an advantage over the overhead because you can tape the flipchart pages to the wall for future reference. But whether you use blank transparencies or the flipchart, remember to label them using the titles provided in the Instructor Notes. Titles serve to focus the discussion and cue participants to accompanying material in the Lesson Plan outline. Later in the course, perhaps during an exercise, students can refer back to the discussion results. The titles will help students find the information they are looking for quickly and easily.

## Small Group Facilitation

In this course you will see the small group concept used in two different ways—for roleplay activities and for discussion. In both cases, basic guidelines for small group organization apply. Listed below are some tips that will help you to structure small group interaction to derive maximum benefit. Refer to the next section, Overview of Course Activities, for detailed instructions about how to conduct the roleplay activities.

### Guidelines for Discussion Groups

Randomly divide the class into small groups of 3-5 people. Ensure that people who know each other are in different groups. Remind the participants that everyone should speak once before anyone speaks twice during small group discussions. Then, instruct the group to select a facilitator, reporter, and timekeeper.

- Facilitator. The facilitator will read the questions aloud to the group.
- Reporter. The reporter will take notes and summarize the discussion results for the entire class.

  NOTE: All students should take notes during the discussion even though only the reporter will report the results to the class.

- Timekeeper. The timekeeper should observe and enforce the time constraints of the discussion.

NOTE: The position of timekeeper is a vital one. You will notice that the allotted time may occasionally appear to be short. The purpose of keeping the exercise short is to maintain the momentum of the class and to provide time to complete all of the materials. Timekeepers ensure that small groups stay on track and focus on the activity.

You should periodically rotate these roles within the group, for example, with each new small group discussion/exercise. This requires students to develop new skills; people tend to stick with roles in which they feel most comfortable. Additionally, change the configuration of the groups occasionally by moving individuals clockwise from one small group to another. This is particularly helpful in long term classes; the opportunity to get to know new people creates a more stimulating atmosphere.

## Overview of Course Activities

- **"Getting Started" and "Putting It All Together"**

  The overall strategy for this course is hands-on practice in preparing and presenting instructional materials. Thus, an evolving activity has been designed which culminates in the Final Presentations.

  Components of this evolving activity have been included in Lessons 6–10. Each component deals with an essential element of training delivery and is listed here:

  - Getting Started—Determine Your Lesson Objectives
  - Getting Started—Create Your Evaluation Instrument(s)
  - Getting Started—Decide on Your Methods
  - Getting Started—Design Your Own Teaching Aid(s)
  - Getting Started—Develop Your Lesson Plan

  Each "Getting Started" exercise has been designed to prepare Instructor Trainees to teach. As the final test of these newly acquired skills, students will deliver a half-hour lesson segment. These presentations are vital to the Instructor Training Course strategy and represent a substantial portion of overall course time.

- **Additional Activities and Exercises**

  In addition to the "Getting Started" activities, which are specifically designed to prepare students for the Final Presentations, exercises have been included whenever possible to help students apply what they have learned, to illustrate the material presented, and to promote an interactive learning environment.

  Many activities are designed to give new instructors a chance to practice various aspects of instruction and public speaking. For example, the "reporter" for a small group must organize material and present it to the class. The "observer" of a skill demonstration must rate performance. Be aware that this practice is necessary to develop competence and assign the role to the more reticent students rather than letting the stronger members take over.

## ▸ Roleplays, Mini-Presentations, and Demonstrations

### ▹ Preparation

***NOTE:*** Copy the roleplay cards in Appendix A for distribution at the appropriate time during the course. These cards appear in the Instructor Guide only. Duplicate the scenario pages before class, cut out the scenarios, and then separate the instructor cards from the student cards for distribution.

For the demonstration (Teach a Simple Skill, Lesson 6) and the mini-presentation in Lesson 8, reproduce enough copies of the demonstration checklist and the mini-presentation checklist for each presenter to get feedback from the Instructor Trainer and all observers. The checklists are included in Appendix B, References.

### ▹ Organization

Randomly divide the class into small groups of 3-4 people. Ensure that people who know each other are in different groups. For smaller classes, a pair of students can enact the roleplay at the front of the room.

Tell the group to select an instructor, a student, and one or two observers. Rotate these roles within a group.

Student. The participant should enact the student role.

Instructor. The participant should enact the instructor role using the principles learned in the lesson.

Observer(s). The observer(s) should watch to determine if the targeted instructor skills are being portrayed and use the checklists to record feedback.

### ▹ Implementation

Provide a topic or distribute the activity cards. The student roleplay cards contain more specific information about the scenario than the roleplay cards for the instructor. To ensure a real-life, spontaneous roleplay, it is important that roleplay participants not share the instructions on the cards with each other.

- Evaluation

  The observer(s) should then be prepared to share their observations with the Instructor Trainee who enacted the instructor role, using the guidelines for effective feedback in Lesson 2 as a guide. Give participants a few minutes to review the forms and then collect these informal evaluation tools. This type of documentation is an important part of the ongoing evaluation process.

## References (Appendix B)

Many references have been developed specifically for use during this course and, even more importantly, for use as Instructor Trainees begin to teach. They can be found in Appendix B, References, in both the Student and Instructor Guides. Please review these materials and encourage students to use them whenever applicable throughout the course, such as during roleplays and for completing activities.

## Course Materials

The following materials, equipment, and supplies are necessary to conduct the Instructor Training course:

- Instructor Guide(s)
- Student Guide(s)
- Overhead projector
- Blank transparencies

- Slide projector and carousel
- Projection screen
- Extension cord

- Flipchart stand/pad
- Flipchart markers
- Whiteboard and/or blackboard
- Whiteboard markers and/or chalk

- Masking tape
- Paper, pens, etc.
- Film projector

Additional recommendations, if available:

- Computer
- LCD display panel
- Laser pointer
- TV/VCR (extremely desirable)
- Video camcorder (extremely desirable)
- Monitor, blank tapes

The specific requirements and additional recommendations for each lesson are listed at the beginning of each lesson plan in the Instructor Guide.

## Student Evaluation

The EMS Instructor Training Course includes several means for assessing student achievement of objectives. The primary source for evaluation is the student's performance in developing and presenting a lesson plan, and a comprehensive presentation evaluation form has been provided in Appendix B for that purpose.

- **Informal Evaluation Opportunities**

  However, the quality of student participation in instructional activities, question and answer sessions, and class discussions should also be noted as part of the assessment process. Therefore, the instructor is encouraged to take advantage of informal evaluation opportunities throughout the course.

  Suggested evaluation strategies are specified in the Instructor Notes, and sample checklist(s) have been provided in Appendix B for recordkeeping purposes.

- **Additional Written Tests**

  Additional written tests may be developed by the Instructor Trainer to evaluate end-of-lesson or end-of-course objectives as deemed necessary. Each student must demonstrate attainment of knowledge and skills in each area taught in the course. It is the responsibility of the Instructor Trainer to assure that students attain proficiency in each topic area before they proceed to the next area.

- **Requirements for Course Completion**

  Student requirements for completing the course are as follows:

  - Skills. Students must demonstrate skill proficiency as described in the lesson objectives
  - Knowledge. Students must demonstrate content knowledge comprehension as described in the lesson objectives
  - Attitude. Students must demonstrate conscientiousness, interest, and enthusiasm in the course

- Attendance. Students should be required to attend all lessons. The Instructor Trainer should establish an attendance policy prior to course delivery and should communicate that policy to students during the first session. Attendance is required at all tests and evaluation sessions. At the discretion of the Instructor Trainer, special examination sessions may be provided for students who miss tests for valid reasons.

If, after counseling and remediation, a student fails to demonstrate competence in specific knowledge and skills, or to demonstrate an appropriate attitude, the student should not be permitted to pass the course. The level of knowledge and skills attained by a student in the classroom will be reflected in his or her performance on the job.

- **Evaluation of Post-Instruction Performance**

Since the primary objective of the course is to develop the student's ability to teach EMS courses, the ultimate indication of program effectiveness is how well the student subsequently performs as a course instructor. Each state should develop a comprehensive program for evaluating competency.

If at all possible, the Instructor Trainer should plan to evaluate each student's performance as an instructor of a DOT/NHTSA EMS curriculum package. This can be accomplished in one of several ways, depending upon state or local practice. The Instructor Trainer could sit in as a reviewer on the first course for each new instructor. Or, s/he could volunteer to assist during initial training experiences. New instructors could be required to do some student teaching prior to being a lead instructor. An option at the local level is to confer certification after the instructor candidate successfully presents their first course.

- **State-Specific Requirements**

Additional qualifications may be imposed by the State or area in which the curriculum is given. In the event that the curriculum is offered by a college or university and credits are given for successful completion, additional restrictions may apply. The Course Administrator should contact the State EMS office prior to conducting the Instructor Training Program to be certain that all requirements are met.

## Program Evaluation

An ongoing evaluation process is critical to identifying deficiencies in the course. The primary method of objectively evaluating the Instructor Training Program's effectiveness is through student performance during and post-instruction, as stated above. In addition, students should be asked for feedback.

- **Course Evaluation Form**

  An evaluation form is provided in Appendix B so students can react to the course in terms of relevance of content, usefulness of learning activities, potential for transfer of learning to performance, and instructor effectiveness. Make a copy of this form for distribution during the last class session.

  The Course Evaluation Form should be administered at the end of the course. The information gathered can then be used to refine instructional strategies, adjust time frames, modify classroom design, and address facility issues for future courses.

- **Lesson Evaluation**

  Additionally, the Course Evaluation form can be easily modified to solicit lesson-specific feedback. When administered after each lesson, the evaluation form will more discretely assess program strengths and weaknesses. This is highly recommended, and a sample End-of-Lesson Evaluation Form is included in Appendix B as well.

# INTRODUCTION

## 1

**Introductory Remarks** ◄
**Lesson Objectives** ◄
**Course Materials** ◄
**Administrative Details** ◄
**Course Objectives** ◄
**Course Expectations** ◄

# INTRODUCTION

## *OVERVIEW*

**Suggested instructional time for this lesson:** 1/2 hour

### Introduction

This lesson opens the Instructor Training Program with welcoming remarks from the instructor(s) and/or course administrator, as well as student introductions. Depending upon local practice, a class roster may be circulated and initialed for registration purposes.

This lesson is intended as a learning experience for the Instructor Trainees. It provides a model for an appropriate way to open a course. The instructor will lead a guided discussion regarding the significance of each component of the introductory lesson.

### Lesson Objectives

Through group discussion and question and answer sessions, the EMS instructor trainee will be able to:

- State the purpose and goals of the Instructor Training Program
- List the elements of an appropriate course introduction
- Explain the purpose and desired result of each element of the introduction

### Lesson Materials

- Overhead projector and screen
- Flipchart and markers

### Instructional Strategies

- Lecture
- Discussion
- Question and answer

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | **I. Introductory Remarks**<br>A. Registration<br>B. Welcoming remarks |

## *ADDITIONAL INFORMATION*

## I. Introductory Remarks

### A. Registration

It is important that a member of the teaching staff greet students as they arrive. The teaching staff should determine in advance who will open the first session, the staff members who plan to attend, and what each person's responsibilities will be. As students arrive, say something like this, "Good morning, and welcome to the National Standard Curriculum: Instructor Training Program. My name is ______________________.

Whether the course administrator, the lead instructor, or the educational facility handles registration, it is important for the instructor to keep accurate attendance records. Obtain a list of those enrolled prior to the first class, and use it as a sign-in sheet. The premise here is that formal registration will have occurred prior to start time for the first session, and that the instructor is simply confirming attendance. Ask students to verify spelling and write their initials next to their name.

### B. Welcoming remarks

As you circulate the class roster, you can begin the class. Start by giving the students a framework from which to view the coming program. In instructional jargon, that's known as an "advanced organizer." It helps students mentally prepare for what is ahead. Let them know the purpose of the course and something about how those goals will be accomplished.

For this course, the advanced organizer might sound something like this:

The purpose of the Instructor Training Program is to equip you, the Instructor Trainee, with the skills and tools you will need to conduct training effectively. You will be encouraged to participate in discussions and exercises that are designed to develop those skills. We will discuss the unique characteristics of adult students, and the theory that underlies a comprehensive instructional program. You will apply this theory as you walk through each step in the design, development, and delivery process, creating your own lesson plan as you go. By the end of our 40-hour course, you will actually teach your fellow trainees a portion of a lesson from the National Standard Curricula EMT-Basic Course. But before we go any further, let's take a moment to introduce ourselves.

*INSTRUCTOR NOTES*

**Conduct** activity

The purpose of this activity is to introduce participants to each other, begin the training on an upbeat, "fun" note, and give participants their first experience with speaking in front of this group.

Summarize the activity by telling participants that in this exercise they talked for one and a half minutes on a topic they probably knew nothing about and hadn't prepared for. In teaching EMS courses they will know their subject matter and will be well prepared.

*LESSON PLAN*

C. Staff/student introductions

  1. Activity 1.1—Icebreaker

  2. Student motivation for attending

*ADDITIONAL INFORMATION*

C. **Staff/student introductions**

One essential component of a course opening is the introductions. After you have said hello and presented a brief overview of the course, the lead instructor or the course administrator should introduce everyone on the staff that is present. Introductions should include relevant information regarding credentials and experience. Student introductions can be accomplished through the use of the following activity.

1. Activity 1.1—Icebreaker

Ask participants to write down their favorite hobby or activity (other than EMS), and to fold the piece of paper.

Collect participant responses. Place them in a box, hat, or other container.

Ask each participant to choose one piece of paper (and to let you know if they have chosen their own; every participant should have an activity that IS NOT their own).

Explain that each participant will introduce him or herself, describe their length and type of service, then talk for one and half minutes on the subject on the piece of paper.

Time participants. They will probably want to stop before time is up. Encourage them to keep going.

After the exercise, debrief. Ask participants what it was like to talk on an unfamiliar topic and what would have made the experience better.

2. Student motivation for attending

Student motivation is an important component to successful training. Find out such things as: Why are your students here? Is the training mandatory or voluntary? Are they excited about the subject matter? Are they full-time, paid EMS professionals, or are they volunteers who are attending training on their own time?

These are important questions to be answered at the beginning of a course since the answers could affect how you present material, and/or how much

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| **Write** on flipchart<br>Go over the lesson objectives using a prepared flipchart page. | **II. Lesson Objectives**<br>■ State the purpose and goals of the Instructor Training Program<br>■ List the elements of an appropriate course opening<br>■ Explain the purpose and desired result of each part of the opening |
| Take a moment to go over the contents of the Student Guide. | **III. Student Guide**<br>■ Course Overview<br>■ Lessons 1-10<br>■ Final Presentations<br>■ Appendices |

material you cover. For example, if you have a highly motivated group, you may go through the course faster than anticipated. In this case, you should restructure the course to add more in-depth information, and/or to include more practical exercises.

If a group is unmotivated, find out why. Address the issues whenever possible. Enlist the students' support in making the course more fun and interesting. Control is important to adult learners. If you can persuade them that they influence what occurs, they may work with you instead of against you to create a more productive learning experience.

## II. Lesson Objectives

Lesson objectives are presented at the beginning of each lesson in the Instructor Training Program. This gives you, the instructor, the opportunity to let the students know exactly what they should be focusing on during the lesson. Stating the objectives in the beginning of the lesson is another example of an advanced organizer.

In this course, it is suggested in the Instructor Notes that these objectives should be transcribed onto a flipchart page before class. However, it is just as effective to use a transparency for this purpose. You, as the instructor, should make the determination when you are preparing your materials before class. To increase student attentiveness, it is a good idea to switch between these instructional tools. The variety helps to sustain interest.

## III. Student Guide

- Course Overview—this section, although directed to the Instructor Trainer, is included in the Student Guide for reference.
- Lessons 1-10
- Final Presentations—this section includes a description and the lessons from EMT-Basic that students will refer to for their Final Presentations.
- Appendices—refer to the Table of Contents for Appendix B, References. Take a moment to familiarize yourself with these resources.

*INSTRUCTOR NOTES*

Distribute a copy of the course schedule and makeup policies, if available.

Pass a hat and have students draw the name of the lesson they will be presenting.

Have students turn to the Final Presentation section. Review the description and give students a moment to look over the EMT-Basic lesson they have been assigned.

*LESSON PLAN*

## IV. Administrative Matters

A. Course Schedule

B. Makeup policies

C. Assign Final Presentation time slots

  1. Lesson assignments

  2. Activity description

*ADDITIONAL INFORMATION*

## IV. Administrative Matters

### A. Course Schedule

The course schedule should be distributed and discussed.

### B. Class makeup policies

Class makeup policies should be clearly delineated. If possible, provide students with a handout indicating policy. Let them know how they can contact staff members for assistance.

### C. Assign Final Presentation time slots

It is important to the structure and flow of the Instructor Training Program to assign time slots for students to give their Final Presentations. One impartial, relatively hassle-free method to assign time slots is to draw from a hat.

1. Pre-course preparation

Prepare for this by noting the number of students in class. Review the description in the Final Presentations section. Then, make a copy of the table of contents provided and cut it up so that one lesson name appears on each page. If there are more people enrolled than lessons, these lessons can be split between two class members: Baseline Vital Signs and Sample History, Lifting and Moving Patients, and Initial Assessment.

2. Assignments

Put the lesson names into a hat and have students draw. They may trade among themselves if they like, but within a few minutes, read the list of lessons as presented in the table of contents and note the name of the student who drew each lesson. Have students present the lessons in sequence. This method prevents duplication of topics. Additionally, by the end of the training program, students will have seen a significant portion of the EMT-Basic Curriculum presented. Presenting in order will add a cohesive sense to the entire Final Presentation experience and will predetermine time slots based upon an impartial draw. Be sure to ask students to begin their resource and literature search right away. They should bring in all reference materials and props (if portable) as soon as possible.

*INSTRUCTOR NOTES* | *LESSON PLAN*

## V. Facility Information

The following information should be made available to students during the opening session of the course:

- Location of restrooms
- Building information
- Exits
- Eating facilities
- Smoking policy/rooms
- Telephone and message procedure
- Emergency evacuation procedure
- Handicapped accessibility

*ADDITIONAL INFORMATION*

## V. Facility Information

33

*INSTRUCTOR NOTES*

**Display** OH #1-1

Read the opening statement, or stem, as you go over the course goals:

*At the conclusion of the course, the student will, at a minimum, be able to:*

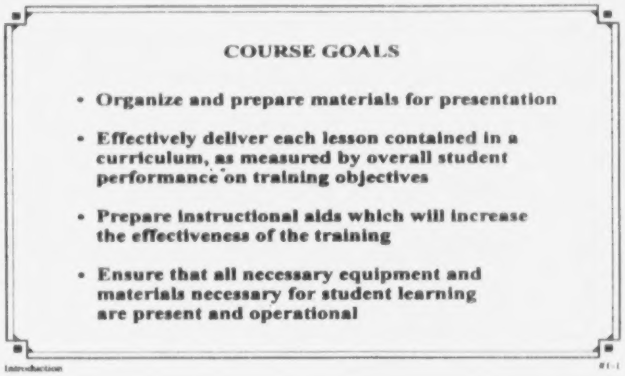
Tell students that the stem says *who* will achieve the goals and *when* they will be attained.

*LESSON PLAN*

## VI. Course Goals

A. Overview

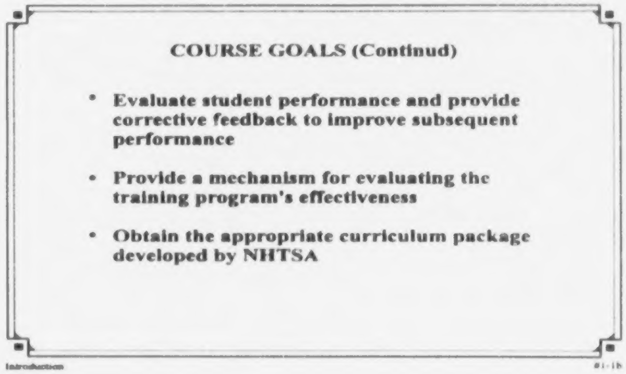
B. List of goals



**COURSE GOALS**

- **Organize and prepare materials for presentation**
- **Effectively deliver each lesson contained in a curriculum, as measured by overall student performance on training objectives**
- **Prepare instructional aids which will increase the effectiveness of the training**
- **Ensure that all necessary equipment and materials necessary for student learning are present and operational**

Introduction #1-1



**COURSE GOALS (Continud)**

- **Evaluate student performance and provide corrective feedback to improve subsequent performance**
- **Provide a mechanism for evaluating the training program's effectiveness**
- **Obtain the appropriate curriculum package developed by NHTSA**

Introduction #1-1b

*ADDITIONAL INFORMATION*

## VI. Course Goals

### A. Overview

The EMS Instructor Training Course is designed to provide students who are clinically competent in a specific content area with the instructional skills to deliver training effectively. It focuses on instructional preparation, presentation, and evaluation. Upon completion of the course, the student should be able to teach any of the curriculum packages in which they are clinically competent.

### B. List of goals

At the beginning of a course or lesson, it is important to focus the attention of your audience by clearly stating the expected outcome(s) of the instruction. Use a prepared flipchart or transparency with the objectives listed as you mention each one.

Please note that the overhead sometimes lists the course goals but does not include the opening statement. For this course, the opening statement, or stem, of each course goal is as follows:

At the conclusion of the course, the student will, at a minimum, be able to:

Notice that the stem states *who* will attain the objectives: the student, and *when* the objectives will be attained. Please read the opening statement, included in the Instructor Notes column, as you go over the course goals.

Additionally, you should mention that more specific training objectives for each lesson are presented at the beginning of each lesson, and are included on the overview page in both the Instructor and Student Guide.

*INSTRUCTOR NOTES*

**Ask** a question

What are some of the ways in which you hope this course will make you an excellent instructor? What skills do you hope to develop?

Write on flipchart

Record responses on a flipchart labelled Course Expectations.

Go around the room. Have each person restate their name and state one expectation. Write down the name and expectation.

For out-of-scope or unreasonable expectations, explain that there are some things that this course cannot deliver. Engage the student in open dialogue to come up with an expectation that can be met in this course.

Tape the list to the wall. Then, explain how the course goals and lesson plans are designed to meet these expectations.

*LESSON PLAN*

## VII. Expectations

A. Unspoken desires that can lead to disappointment

B. Individual expectations

C. Out-of-scope or unreasonable expectations

D. The purpose of documenting and posting expectations

*ADDITIONAL INFORMATION*

## VII. Expectations

### A. Unspoken desires that can lead to disappointment

Expectations are desires, often left unspoken, that when left unsatisfied result in disappointment. To avoid disappointing your students and to ensure that everyone is focused on attainable goals, it is wise to get expectations "out on the table." The process of identifying and clarifying personal desires is a valuable mental activity and increases the probability that goals will be fulfilled.

### B. Individual expectations

Ask each student to state one skill or knowledge they believe they will develop or understand by attending this course. Be prepared to document responses.

### C. Out-of-scope or unreasonable expectations

For this course, expectations will be stated and evaluated for relevance to course topics to determine if they are realistic. Out-of-scope expectations should be identified as such. If a student expresses an unreasonable goal, engage the student in an open dialogue to think of one that can be fulfilled within the constraints of this curriculum.

### D. The purpose of documenting and posting expectations

Once you have documented expectations for each student, you have achieved several things. First of all, students are clear on what they hope to accomplish. You, the instructor, have a better feel for your audience. Also, you have documentation that you can refer back to at the end of the course. This will help to "close the circle" of instruction, confirming for participants that their time was well spent.

When you post the list on the wall, you make it clear that you take the students seriously. This gives them the sense that they will be able to influence the direction of the learning experience to best meet their own particular needs.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | E. The connection between course goals, the lesson plan, and expectations |
| | **VIII. Summary** |

**E. The connection between course goals, the lesson plan, and expectations**

After you post the list, be sure to tie the expectations directly to the previously established course goals. The expectations that have been identified emphasize those areas in which students feel a particular need, whether prompted by curiosity, concern, or lack of confidence. Each expectation should be addressed in the stated objectives, at either the course or lesson level.

## VIII. Summary

In this lesson the Instructor Trainer modelled how to open a course, identified key elements of a course introduction, and led a guided discussion about why each is included. Lesson 1 consisted of student and instructor introductions, lesson objectives, scheduling requirements, facility information, and stating the course goals.

We also identified individual expectations for the course in order to facilitate the Instructor Trainees' personal growth and development. Particularly in the refinement of so-called "soft skills," personal expectations can reveal valuable data to the instructor, allowing for an adjustment in the priority and emphasis of course topics.

# COURSE GOALS

- **Organize and prepare materials for presentation**
- **Effectively deliver each lesson contained in a curriculum, as measured by overall student performance on training objectives**
- **Prepare instructional aids which will increase the effectiveness of the training**
- **Ensure that all necessary equipment and materials necessary for student learning are present and operational**

# COURSE GOALS (cont'd)

- Evaluate student performance and provide corrective feedback to improve subsequent performance
- Provide a mechanism for evaluating the training program's effectiveness
- Obtain the appropriate curriculum package developed by NHTSA

# INSTRUCTOR ROLES AND RESPONSIBILITIES

## 2

Introduction to Various Roles ◄
Problem Students and Challenging Situations ◄
Positive, Constructive, and Corrective Feedback ◄
Team Teaching Guidelines ◄
Instructor Attributes ◄

# INSTRUCTOR ROLES AND RESPONSIBILITIES

## *OVERVIEW*

**Suggested instructional time for this lesson:** 2 hours

### Introduction

Generally speaking, instructor performance falls into three broad categories: preparation, delivery, and evaluation. However, many responsibilities arise within the context of these major job functions, with skill requirements in diverse areas such as communication, logistics, administration, ethics, public speaking, and equipment oversight. This lesson presents comprehensive descriptions of various roles and offers guidance to the novice or experienced instructor in how to serve students with care and competence.

### Lesson Objectives

Through group discussions, question and answer sessions, and simulated instructional situations (roleplays), the EMS instructor trainee will be able to:

- Define five instructor roles
- Demonstrate the ability to use three types of feedback appropriately
- List two guidelines for effective team teaching
- List four attributes of an effective instructor

### Materials Needed

- Overhead projector and screen
- Flipchart (prepared prior to class)

### Instructional Strategies

- Lecture
- Discussion
- Question and answer
- Visual aids
- Roleplay scenarios

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*INSTRUCTOR NOTES*

**Go over the objectives**, using a flipchart prepared in advance. Then, post the objectives prominently in the room.

**Ask** a question

What would you say are the key roles and responsibilities of an instructor?

**Write** on flipchart

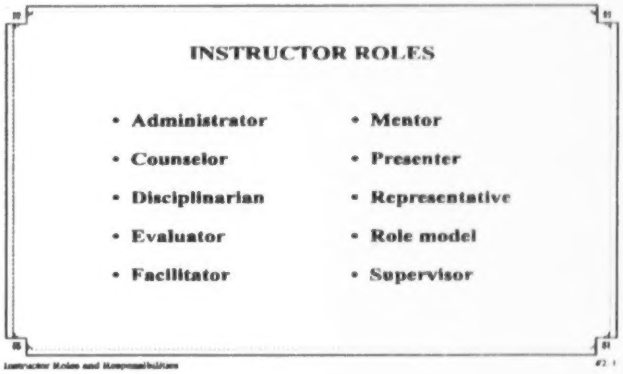
List responses on a flipchart labelled Instructor Roles.

**Display** OH #2-1

*LESSON PLAN*

## Lesson Objectives

## I. Instructor Roles and Responsibilities



INSTRUCTOR ROLES

- **Administrator**
- **Counselor**
- **Disciplinarian**
- **Evaluator**
- **Facilitator**
- **Mentor**
- **Presenter**
- **Representative**
- **Role model**
- **Supervisor**

Instructor Roles and Responsibilities

#2-1

A. Administrator

  1. Function

  2. Characteristics

*ADDITIONAL INFORMATION*

## I. Instructor Roles and Responsibilities

### A. Administrator

1. Function

As an administrator, you may be responsible for overall course operations and logistics.

2. Characteristics

An effective administrator must be organized and detail-oriented. Additionally, effective communication skills are required, because as an administrator you often have to orchestrate a number of diverse personalities.

## INSTRUCTOR NOTES

**Display** OH #2-2

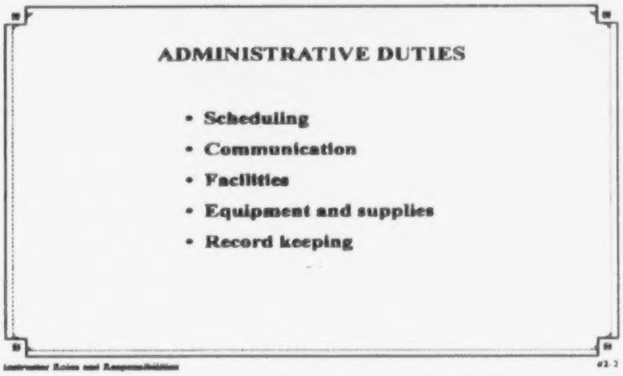
**Ask** a question

Has anyone has ever served in an administrative position?

What were some of your duties?

## LESSON PLAN

3. Administrative duties



**ADMINISTRATIVE DUTIES**

- **Scheduling**
- **Communication**
- **Facilities**
- **Equipment and supplies**
- **Record keeping**

#2-2

4. Designated course administrator's role

B. Counselor/advisor

1. Function
2. Characteristics

*ADDITIONAL INFORMATION*

3. Administrative duties

Administrative duties include course scheduling and planning, such as arranging for the instructional facilities. You will need to ensure that the room is large enough for all activities, note whether a particular course has a recommended room configuration, and handle the logistics of room setup. Also, you must determine equipment requirements and make sure everything is in working order. The selection of visual aids and references (such as journal articles) is an administrative duty that should be done well in advance of the course so that appropriate numbers of copies can be made.

Correspondence with the student is another administrative responsibility. The enrollment confirmation, and possibly a screening process for admission will have to be considered.

Typically, student records will need to be kept and possibly forwarded to the appropriate offices. When state-specific certification requirements exist, student records are included in the evaluation process.

4. Designated Course Administrator's Role

Many times an individual other than the instructor is the designated course administrator, e.g., the Course Coordinator. This person is responsible for the overall operation of the course, but many administrative duties are shared. Typically, the administrator's responsibilities involve logistics and operations, while the instructor is concerned with course content, delivery, and instructional aids.

## B. Counselor/Advisor

1. Function

As a counselor, students depend on you for advice and good judgment.

2. Characteristics

In order to serve effectively as a counselor, you must demonstrate the characteristics of being trustworthy, empathetic, and an active listener.

*INSTRUCTOR NOTES*

**Ask** a question

What standards for behavior do you feel are necessary in the classroom?

How would you communicate those standards to students?

*LESSON PLAN*

3. Establish an open and trusting relationship
4. Purpose

C. Disciplinarian

1. Functions as a coach
2. Sets and enforces standards

*ADDITIONAL INFORMATION*

3. Establish an open and trusting relationship

Exhibiting these characteristics lays the foundation for an open and trusting relationship. To earn and maintain your students' trust, stress the confidentiality of your communication. This is vital. Students must be assured they can communicate honestly and openly.

4. Purpose of counselor/advisor

The purpose of an advisor or counselor is to offer guidance and assistance to students on an as needed basis, as appropriate within the instructor's role. When circumstances affect classroom performance, it is entirely appropriate for instructors to discuss the situation with the student and to work with them whenever possible to help them to deal effectively with both home and family obligations and EMS career objectives.

However, it is important to remember that one cannot be all things to all people. It is neither necessary nor appropriate for an instructor to take on the responsibilities of counseling students regarding their personal life; this is better addressed in a therapeutic setting outside the classroom. In these cases, an instructor should refer students to community resources.

**C. Disciplinarian**

1. Functions as a coach

As a disciplinarian, the instructor establishes standards of behavior and requires compliance to the standards. This is perhaps best described as a "coaching" role. To be effective, consequences for non-compliance must be made known and enforced consistently.

2. Sets and enforces standards

It is not easy to discipline effectively. However, keep in mind that it is easier to "loosen up" than to get tough. A good coach is very clear about what is expected and equally clear about the consequences of non-compliance. In EMS courses, non-compliance to standards established in the classroom may mean the student is not ready to assume the on-the-job responsibilities of an EMS professional. These are critical skills and it is appropriate to establish high standards during training.

## INSTRUCTOR ROLES AND RESPONSIBILITIES

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| As you lead the following discussion regarding challenging students and situations the Instructor Trainees may encounter, emphasize the following general guidelines for dealing with *any* difficult situation and then list them on the board:<br>■ Respect every student<br>■ Assert your position with confidence<br>■ Direct the discussion toward course objectives | 3. Problem students and challenging situations |
| **Ask** a question<br>As you present each of the following examples, ask students how they would handle the situation.<br>Refer to the suggestions given in the Additional Information and offer advice from your own teaching experiences. Discuss the pros and cons of each suggestion. | a. Hesitant student<br>b. Monopolizing student<br>c. "Voice of Experience" student |

*ADDITIONAL INFORMATION*

3. Problem students and challenging situations

At times you may encounter students who are uncooperative or disruptive, for whatever reason. The best way to handle these students is to be *respectful*, yet *assertive* and *directive*. Remember you are in charge, but don't insult them. Speak with them on a break, rather than correcting them in front of others.

When you are leading training or giving a presentation, you will inevitably encounter various personality types. Classroom behavior resulting from various personality types can create situations that will need to be dealt with. How you handle these situations can affect the attitudes of all the participants and the success of the course. Listed below are some characteristics and tips for handling different types of participants.

a. Hesitant student

This person is shy, reluctant, and silent most of the time. Strategies for dealing with the hesitant student include using small group activities, calling on them from time to time to answer non-threatening questions (ones you know they can answer), and offering encouraging statements that let them know that their contributions are worthwhile and appreciated.

b. Monopolizing student

This student tends to be opinionated and likes to dominate class discussions. This type of student can dampen the enthusiasm of the other students, who may need clear openings and encouragement to participate. Some statements to use with this type of student are: "I'd like to get another opinion on this issue," or "I appreciate your input, but everyone needs an opportunity to participate."

c. The "Voice of Experience" student

Closely associated with the monopolizing student, this person has a tremendous need to be heard as well. S/he likes to display his/her knowledge to everyone by using big words, lots of statistics, even occasional name dropping. Always be polite, but maintain control of the discussion by saying the group needs to move to the next topic. If this person is knowledgeable, give them a task, or even a leadership role. Another tactic is to administer a test that you know is difficult, but which is at the level that they claim to be. When it

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|

d. Non-listening students

e. Idea-zapping students

f. Complaining or negative students

is made clear that there are things they don't know, they will more than likely be ready to learn.

d. Non-listening student

At times, a student's attention may wander. One strategy to refocus a non-listener is to ask something like this: "Could you take what Carol has just said and explain it another way?" Or, ask "How does your viewpoint compare with what has been expressed?"

If multiple students seem to be "tuning out," it could be a cue to you that a break is needed, the instruction is not "hitting home," or there is an environmental distraction that needs to be dealt with.

e. Idea-zapping student

This person is an expert at putting down the ideas of others. S/he finds creative ways to inhibit suggestions or cast doubt on solutions. This can seriously undermine small group interaction as well as classroom discussion, so be sure to watch for this as groups break out to develop their lesson plans.

During discussions, rescue an attacked idea before the whole group dismisses it by making concrete statements that confirm potential usefulness. Then, ask the idea-zapper to come up with an idea of his/her own.

f. Complaining or negative student

Masters of blame and fault-finding gripers exist just about everywhere. Stop a complainer in their tracks by asking questions that force the person into a problem-solving mode, such as "What steps do you feel are necessary to correct this situation?" Also, it can help to say "I understand" occasionally, depending upon the reason for the negative attitude.

# INSTRUCTOR ROLES AND RESPONSIBILITIES

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| | g. Rigid viewpoints<br>h. Hostility and anger |
| **Ask** a question<br>Does anyone have any more examples of problem students or challenging situations and ways to handle them? | i. The "Clown" |
| **Ask** a question<br>Who can tell me about some different types of feedback?<br>Have students describe the expected outcomes associated with each type of feedback mentioned. | 4. Feedback |

61

g. Rigid viewpoints

This type of person will take a position on an issue and not want to move from it. S/he can make it difficult for the group to make progress. Try to get this type of person to admit there is another side to every issue. One strategy is to ask the student to clearly state the rationale behind an opposing viewpoint.

h. Hostility and anger

Some students can be antagonistic, aggressive, and unfriendly. Fortunately, adult learners typically have a strong internal motivation to be involved in instruction, so "bad attitudes" in general are relatively rare. The exception would be that adults might be more likely to contest results that prevent them from achieving their goals, such as a test score that is inadequate to receive certification.

If the problem is administrative or grade-related, refer the student to the appropriate grievance procedure. See Lesson 2, Legal Implications, for more information on this topic. If you run into an inexplicably angry student in the classroom, avoid getting wrapped into a debate. Keep your cool and respond in a mild, objective manner. Sometimes activities can redirect energy toward accomplishing a specific task. There is nothing like success to turn a negative attitude around.

i. The "Clown"

This type of student hinders group progress with an abundance of inappropriate humor. Strategies for dealing with a "clown" include complimenting him/her when s/he makes a worthwhile contribution and never rewarding attempts at inappropriate humor with laughter. During a serious dialogue, remember to ask this individual to contribute.

4. Feedback

For whatever reason the role of disciplinarian becomes necessary, an instructor can coach students to help overcome performance difficulties. One way to do this is to provide appropriate feedback. Most of the strategies that we just mentioned for dealing with problem students and challenging situations involved the use of feedback.

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## *INSTRUCTOR NOTES*

Emphasize that positive feedback reinforces desirable behavior.

**Display** OH #2-3

Remind students to use constructive feedback when confronting undesirable behavior.

**Display** OH #2-4

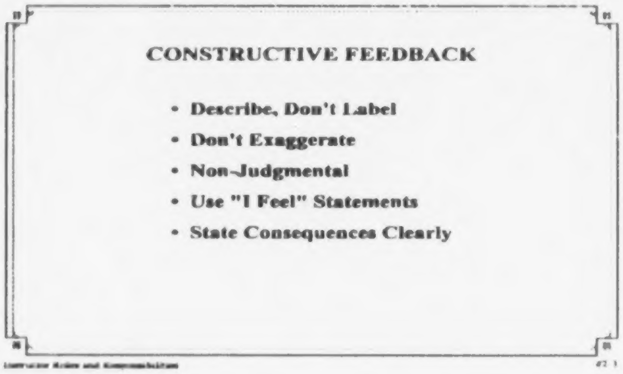
Emphasize that the goal of corrective feedback is incremental improvement.

Mention that all three types of feedback are critical to your students' professional growth.

## *LESSON PLAN*

a. Positive feedback

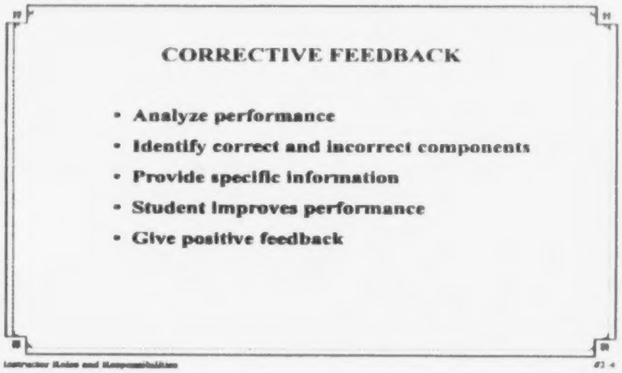
b. Constructive feedback



**CONSTRUCTIVE FEEDBACK**

- **Describe, Don't Label**
- **Don't Exaggerate**
- **Non-Judgmental**
- **Use "I Feel" Statements**
- **State Consequences Clearly**

c. Corrective feedback



**CORRECTIVE FEEDBACK**

- **Analyze performance**
- **Identify correct and incorrect components**
- **Provide specific information**
- **Student improves performance**
- **Give positive feedback**

## *ADDITIONAL INFORMATION*

Feedback is part of all effective communication, in challenging situations and in those that progress without difficulty. Instructors need to give different kinds of feedback, as each situation demands.

a. Positive feedback

Positive feedback reinforces desirable behavior. Positive feedback is a great "morale booster" because it removes doubt, builds self-esteem, and results in a sense of accomplishment.

b. Constructive feedback

Constructive feedback helps change undesirable behavior. Concentrate on how *you* feel when giving constructive feedback. Use "I feel" statements. For example, don't say, "When are you going to stop being late for class?" Say, "I feel annoyed when you are late for class."

Factors to remember when giving constructive feedback are:

- Describe the behavior about which you are giving feedback; be specific
- Don't use labels such as "immature" or "unprofessional"
- Don't exaggerate; it heightens emotions
- Don't be judgmental; it produces defensiveness
- Use "I feel" statements
- State consequences calmly and clearly

c. Corrective feedback

Corrective feedback is used to improve student performance incrementally. This technique involves analyzing performance, identifying correct and incorrect components, and communicating specific information that the student can use to make subsequent performance improve. This should be a positive learning experience and part of the on-going, informal evaluation process. Corrective feedback lets students know where they stand, thereby reducing frustration and tension in the classroom. It also prevents students from assuming everything is just fine; that "No news is good news." This prevents problems later, during formal evaluations.

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| **Ask** a question<br>What are some informal ways of evaluating student performance? What are some formal methods?<br>Explain that the evaluation process is on-going and cumulative. | D. Evaluator<br>1. Function<br>2. Evaluation methods |

## *ADDITIONAL INFORMATION*

Principles of corrective feedback include:

- Be descriptive, e.g. your hand was in the wrong position
- Be specific, e.g. your assessment of the patient's eyes did not include a pupil check
- Be private; students don't like to be embarrassed in front of peers
- Be positive; find something good in every performance. Make corrections in a positive manner and summarize, emphasizing those things that were done the best
- Be concise; give information in manageable chunks. Don't try to change everything at once
- Be timely; immediately post performance, if student is ready to listen.

## D. Evaluator

### 1. Function

In your role as an evaluator, you compare performance against standards. The standards should be clearly stated in the lesson objectives.

### 2. Evaluation methods

A variety of informal and formal methods can be used to evaluate student progress.

These include:

- Written and Oral Tests/Quizzes
- Essay Questions
- Practical Exams
- Project Assignments
- Observational Reports
- Presentation Checklists
- Peer Review
- Question and Answer

Refer to Lesson 7, Evaluation, for in-depth information on this subject.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| The facilitator assists the learning process rather than controlling it. | E. Facilitator<br>1. Function<br>2. Facilitative teaching<br>a. Comprehension increases<br>b. "Processing and application" time |
| Remind students that adult learners typically have a strong internal motivation to acquire specific knowledge. | 3. Adult learners<br>4. Promote active learning |

*ADDITIONAL INFORMATION*

## E. Facilitator

1. Function

As a facilitator, the instructor aids or assists the student in the learning process. This is accomplished by using facilitation skills to make the students feel free to comment and ask questions.

2. Facilitative teaching

a. Comprehension increases

In facilitative teaching, the emphasis is on student involvement in the learning process. Students are not just passive recipients of your presentation. Consequently, the student influences the delivery of material more than in traditional, lecture-only formats. There are advantages and disadvantages to a student-paced delivery. Comprehension is likely to increase, but scheduling can be affected.

b. "Processing and application" time

To accommodate this, course schedules should provide for "processing and application" time. Use your observation skills to help you assess how the presentation is being received. Based upon these observations, you can decide to continue as planned or to modify the presentation to respond to the audience's needs.

3. Adult learners

The facilitator role is particularly adaptive to the adult learner. Adults have an increased need for material that is relevant to their lives and work, and an increased desire for a collaborative learning climate. They also typically have a strong internal motivation to acquire specific knowledge.

4. Promote active learning

Good facilitators stress the practical application of information, relate material to student experiences, and offer concrete examples to illustrate concepts.

*INSTRUCTOR NOTES*

**Ask** a question

Have any of you ever been in a mentoring relationship?

What were your experiences?

Detailed information about presentation skills is included in Lesson 8, Instructional Strategies and Methods.

*LESSON PLAN*

F. Mentor
   1. Function
   2. Mentor profile
   3. Mentor/protege relationships

G. Presenter
   1. Function
   2. Use plausible, relevant, vivid examples

*ADDITIONAL INFORMATION*

## F. Mentor

1. Function

A mentor is a person who facilitates personal and professional growth.

2. Mentor profile

Good mentors are generally high achievers, and are confident of their own position within the EMS community. Consequently, they don't feel threatened by student excellence and achievements. Mentors motivate students and encourage their professional growth. Instructors, in their role as mentors, serve as role models for students. As such, you should be proud to be an EMS professional and look for ways to promote your students and expose them to new opportunities and challenges within the EMS profession.

Another characteristic of good mentors is that they recognize the unique strengths of each student, while being aware of and accepting his/her weaknesses and vulnerabilities.

3. Mentor/protege relationship

A mentoring relationship can be a natural outgrowth of the instructor/student association. However, if a relationship develops, you must ensure that you do not show preference or favoritism to your protege as a student. All students should be treated equally and fairly.

## G. Presenter

1. Function

Perhaps one of the most visible roles of the instructor is that of presenter. Effective presenters must be able to gain and maintain their audience's attention.

2. Use plausible, relevant, vivid examples

One of the best methods for making information come to life is to make it real; use plausible, relevant, vivid examples. For instance, when discussing the importance of the assessment-based rather than diagnostic approach, offer a real-life scenario with serious consequences. For example, a premature

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | H. Representative<br>1. Function<br>2. Characteristics<br>3. Standard curricula |

71

*ADDITIONAL INFORMATION*

conclusion regarding a patient's condition could delay appropriate intervention and treatment, perhaps threatening the life of the patient.

## H. Representative

1. Function

Another important role for the instructor is that of representative, an authorized delegate of state and national EMS organizations. S/he can also act as a representative to local government.

2. Characteristics

Representatives must be professional and highly qualified. In addition to the immediate concerns of the local EMS unit, they must also be aware of state and national organizational goals and standards.

3. Standard Curricula

States can adopt, not adopt, or adopt and modify standard curriculum which is developed by NHTSA. Instructors are required to teach the standard curriculum that has been adopted by their state. Once certified, instructors are required to teach all of the elements of the standard curriculum.

They can enhance, but not delete any of the content. They must meet all of the objectives. They are obligated to adhere to the curriculum content and objectives because of certification requirements.

Consequences of failure to teach according to the established standard curriculum may include loss of certification or even a lawsuit. For example, suppose an instructor doesn't agree with a standard of care or treatment practice and chooses to instruct students to a different standard or practice. Students then go out on the job and employ non-standard practices or standards of care. If a patient were to experience any unacceptable result, and it was determined that a non-standard practice was performed, the patient could sue the service, the EMS technician, and the instructor.

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# INSTRUCTOR ROLES AND RESPONSIBILITIES

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| **Ask** a question<br>Who are your role models, both now and throughout your life? Why? | I. Role model<br>1. Function<br>2. Characteristics<br>J. Supervisor<br>1. Function<br>2. Assistant/guest instructors<br>a. Valuable role of assistant/guest instructors |

## *ADDITIONAL INFORMATION*

### I. Role model

1. Function

Role models serve as examples of achievements, positive attitudes, and admirable characteristics.

2. Characteristics

It is important for instructors to maintain high standards, both professionally and personally. Hard work, dedication, and a genuinely caring manner are desirable traits in an EMS instructor. Inevitably, role models are imitated because, as the old proverb goes, "Imitation is the sincerest form of flattery." Knowing this, an instructor's behavior must be exemplary.

### J. Supervisor

1. Function

A supervisor directs and inspects performance.

2. Assistant/guest instructors

a. Valuable role of assistant/guest instructors

As an EMS course instructor, there will probably be times when you will work with and supervise guest instructors or assistants. EMS curricula are often skills-based, designed to train EMS professionals for on-the-job performance. To this end, practical skills labs are frequently employed in training to prepare students to successfully demonstrate performance in their state's Practical Exams.

In order to conduct these labs effectively, assistants and/or guest instructors must be available to monitor, train, and evaluate student performance in small groups. One of the administrative responsibilities of conducting a course is to recruit qualified assistants. Often the designated course administrator will handle this, but the primary instructor may be called upon to do so as well.

71

*INSTRUCTOR NOTES*

**Ask** a question

Has anyone team taught before or observed team teaching? If so, what were the advantages?

**Ask** a question

What are some possible drawbacks of team teaching?

Have you experienced any difficulties?

*LESSON PLAN*

  b. Coordination of equipment and instructional aids

  c. Ensuring continuity between sessions

  d. Professional conduct

3. Team teaching (Dos & Don'ts)

  a. Advantages

b. Coordination of equipment and instructional aids

It is your responsibility as the lead instructor to determine the equipment and material requirements for each module, and to work with the other instructors to ensure all requirements are met. Generally, the course administrator will handle logistics, while you will ensure the content is adequately supported with appropriate instructional aids, etc.

c. Ensuring continuity between sessions

You will also be responsible for monitoring the assistant/guest instructor's presentation to ensure continuity between sessions and coverage of all requirements.

d. Professional conduct

Professional conduct is important among the staff, as well as in the student/instructor relationship. Team work among staff members results in positive outcomes not only for the students in the course, but for the EMS community as a whole. Teamwork is precisely what is required in the trauma unit or at an accident site.

3. Team Teaching (Dos and Don'ts)

a. Advantages

There are times when a team teaching approach provides significant advantages to students. For example, when an instructional strategy requires a lot of one-on-one interaction between the instructor and students, a team approach becomes necessary.

Remember, there is an art to team teaching. It requires a sensitivity to your colleague's teaching style, body language, and speaking patterns. Up front planning can greatly enhance the team's effectiveness once they are "on stage."

Some things about team teaching to consider include:

- Diverse teams offer a broad range of expertise and generally enhance facilitator credibility

# INSTRUCTOR ROLES AND RESPONSIBILITIES

*INSTRUCTOR NOTES*

**Ask** a question

How could you prevent difficulties in a team teaching situation?

**Write** on flipchart

Summarize the responses on a flipchart labelled Guidelines for Team Teaching. Add to the list from the guidelines listed here:

- Plan the lesson delivery together, if possible
- Agree on the roles of each team member
- If you remain in class while another is teaching, don't interrupt
- Don't correct each other in public
- Decide in advance how contributions can be made smoothly
- Agree on hand signals to communicate, e.g., time to wrap it up, I have something to add, etc.
- Plan to debrief afterward

*LESSON PLAN*

b. Avoiding common pitfalls

c. Guidelines

*ADDITIONAL INFORMATION*

- A variety of classroom or group interaction styles and voices will hold the audience's attention longer
- Increasing the facilitator-to-participant ratio allows for more individual attention during group exercises and case studies
- A team approach can add a dynamic synergy to the teaching experience and enhance creativity through the interaction of team members
- Two or more facilitators help keep the course moving better; e.g., one facilitates and the other writes on the flipchart/overhead

b. Avoiding common pitfalls

In order to make the most of a team teaching experience, it is wise to plan ahead to avoid common pitfalls. Ensuring continuity between sessions is a major concern. For example, if one instructor teaches the class how to do lower extremity splinting on the first night and the second teacher presents upper extremity splinting on the second night, they must be consistent. Otherwise, students will become confused.

Be sure to address the following items in order to avoid problems:

- Identify the relative strengths of each team member
- Arrange participation to maximize each member's strengths
- Agree on how to handle interactions, disagreements, etc.
- Agree on how to transition from one instructor to the other
- Plan to debrief afterward

Team teaching is like learning how to dance; it is important to avoid stepping on your partner's toes.

c. Guidelines

By following some common sense guidelines, you'll make the most of the team's collective talent. Remember, the goal of instructor-led training is to create a learning environment that best meets the needs of the participants. Be attentive and interested while in session with another instructor. And facilitate teambuilding by consistently backing each other up: in the classroom, with resources, and when handling problems.

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*INSTRUCTOR NOTES*

**Ask** a question

How many instructors have you had that were truly effective and made a significant impact?

Point out that good EMS clinicians do not automatically make good instructors. Ask students to list the 3 things that made those significant instructors so effective.

**Write** on flipchart

Summarize the responses on a flipchart labelled Effective Instructors.

Responses will generally fall within these three categories: Knowledgeable, Skilled, and Motivated/Dedicated.

*LESSON PLAN*

II. **Instructor Attributes**

A. Characteristics of effective instructors

*ADDITIONAL INFORMATION*

## II. Instructor Attributes

### A. Characteristics of effective instructors

Every instructor displays an individual personality, yet there are certain similarities amongst those who are truly effective. The most highly rated instructors are knowledgeable about the subject matter, effective in transmitting that information, motivated to provide the best instruction possible, and concerned about their students.

*INSTRUCTOR NOTES*

**Ask** a question

Ask students when preferences become prejudice.

*LESSON PLAN*

- B. Ethical
  - 1. Definition
  - 2. Ethical conduct essential
  - 3. Lack of ethics affects credibility
- C. Fair
  - 1. Definition
  - 2. Student rights

*ADDITIONAL INFORMATION*

## B. Ethical

1. Definition

An ethical person behaves in accordance with the established moral principles that govern the conduct of a group.

2. Ethical conduct essential

A part of the teacher/student relationship is trust. An instructor must behave in an ethical fashion to inspire confidence and build trust.

3. Lack of ethics affects credibility

Failure to behave according to agreed upon and expected moral principles, such as fairness, integrity, and honor, leads to a loss of credibility.

## C. Fair

1. Definition

A fair instructor is not subject to prejudice that inhibits judgment. While everyone has personal preferences and biases, as an instructor, you must deal with students in an impartial manner regardless of your preferences.

2. Student rights

When instructor preferences interfere with impartial judgment, students are denied fundamental rights. Students have the right to be treated fairly. They have the right to be heard and understood. They have the right to receive an objective presentation of information and an impartial evaluation of their mastery of course objectives. Instructors must understand and compensate for personal preference for this to occur.

For example, certain cultures esteem authority to a greater degree than others. Students from these cultures may find it difficult to offer their opinions without feeling that they have overstepped unseen boundaries.

*INSTRUCTOR NOTES*

**Ask** a question

Ask students what they look for under these categories, (e.g., How an instructor should dress.)

*LESSON PLAN*

3. Effects of bias
4. Legal implications

D. Professional

1. Definition
2. Attire

If you, as an instructor, find a lively and somewhat challenging group more stimulating, you may tend to believe a quiet student is less invested in the course. This may be far from the truth, and it is your responsibility to gather data from many sources and to render objective judgements. If interaction is essential to a student's success, you need to let them know that, and solicit their input.

3. Effects of bias

When the instructor is biased or dismisses a student's ideas, learning is inhibited and students lose respect for the instructor. Material should be presented in such a way that the experiences of the adult student are acknowledged and respected.

4. Legal implications

There are legal implications to biased instruction, whether in attitude, delivery, or evaluation. See Lesson 2, Legal Implications, for more information on gender, race and disability, as well as sexual harassment and sexual preference issues.

**D. Professional**

1. Definition

Professional conduct entails the appropriate presentation of self in demeanor, attire, humor, etc. Because instructors serve as a role model for students, professional behavior is essential. Students look to instructors for guidance. Professional conduct requires attention to attire, attitude, and behavior.

2. Attire

For practical exams and field exercises, instructor attire should be neat and clean, yet comfortable. In the classroom, business dress is often more appropriate. Use discretion and dress according to the subject matter, environmental conditions, and local practice, keeping in mind that your attire strongly influences how you are perceived.

*INSTRUCTOR NOTES*

**Ask** a question

What needs to be done to prepare to teach a class?

**Write** on flipchart

Summarize the responses on a flipchart labelled Preparation Checklist.

Tell students that instructor credibility and student attentiveness go hand in hand. Nothing affects credibility like lack of preparation.

**Refer** to handout

The Precourse Checklist in Appendix B.

Remind instructors to show respect, even if they don't feel it. For example, even a disruptive student should be treated with respect.

*LESSON PLAN*

3. Attitude
4. Behavior

E. Prepared

1. Facilities, equipment, instructional aids
2. Schedule
3. Know your material

F. Giving and earning respect

1. Definition
2. Giving respect

3. Attitude

Instructors should have a helpful and supportive attitude toward students.

4. Behavior

Being a professional means being well-prepared and organized. It also requires treating both staff and students with respect, as we have discussed earlier.

**E. Prepared**

1. Facilities, equipment, and instructional aids

It is important to check out the equipment, visual aids, facilities, and materials long before the students arrive. It's almost impossible to be *too* thorough when planning and confirming arrangements for a course.

2. Schedule

Start sessions on time. As much as possible, adhere to the published schedule. If class participation results in a longer class, mention this fact, and get agreement from the class on ways to adapt, e.g., fewer breaks. Remember, you are teaching adults.

3. Know your material

As we have mentioned before, knowing the material you will teach is essential to ensure learning and to maintain your credibility.

**F. Giving and earning respect**

1. Definition

The term respect means to feel or show esteem for another.

2. Giving respect

Respect entails a willingness to show consideration or appreciation. It is an essential ingredient to positive, productive relationships. Students have a right to be treated with respect.

*INSTRUCTOR NOTES*

**Conduct** activity

Five scenarios have been provided in Appendix A. These should be reproduced prior to class, cut out, and distributed. Blank cards have been included so that you can add new scenarios.

The roleplay can be done using the small group concept described in the Overview. Be sure to assign one or two observers to collect and give feedback to the roleplay participants. Or, have each pair roleplay in front of the class.

*LESSON PLAN*

3. Earning respect
4. Respect creates a supportive learning environment
5. Problem students

## III. Roleplay Activity

A. Model the responses you feel would be most appropriate given what you have learned about instructor roles and responsibilities

B. Apply the guidelines for positive, corrective, and constructive feedback

*ADDITIONAL INFORMATION*

3. Earning respect

The respect of students is earned by modeling correct behavior. Show genuine interest, be ethical, and be fair. Live up to high standards personally and professionally and you will earn their respect.

4. Respect creates a supportive learning environment

The instructor/student relationship is most productive in a climate of mutual respect. When a student fears a sarcastic response, they hesitate to participate, and learning is inhibited. On the other hand, when you show consideration and appreciation for your students, they will trust and respect you. A supportive training environment is created, and your students will not hesitate to seek clarification if they lack understanding.

5. Problem students

As we mentioned earlier, occasionally as an instructor you will encounter "problem students." In these cases, it is important to show respect even if you do not feel it. This establishes a foundation upon which you can demand like treatment. Common courtesy can prevent a difficult situation from deteriorating, particularly if emotions intensify.

On the other hand, you cannot allow a course to become side-tracked by irrelevant issues. If you feel that student comments or questions digress from the focus, determine the significance of the topic that has been introduced then reiterate the goals and objectives for the section or discussion. If the new area is outside the scope, respectfully acknowledge the importance of the new area and offer sources of information if available, but then redirect the class back to the topic at hand.

## III. Roleplay Activity

Refer to Appendix A, Activity Materials. Students will be given scenarios and will model appropriate instructor roles, responsibilities, and responses based upon the information in this lesson. They should apply the guidelines for positive, corrective, and constructive feedback during each roleplay exercise.

*INSTRUCTOR NOTES*

*LESSON PLAN*

## IV. Summary

## References

*ADDITIONAL INFORMATION*

## IV. Summary

This lesson outlined the many roles, responsibilities, and attributes of EMS instructors and offered guidelines for functioning effectively in each role.

## References

HUD Mentoring Program Train-the-Trainee Guide, Developed by ASA, April 1995

# INSTRUCTOR ROLES

- Administrator
- Counselor
- Disciplinarian
- Evaluator
- Facilitator
- Mentor
- Presenter
- Representative
- Role model
- Supervisor

# ADMINISTRATIVE DUTIES

- Scheduling
- Communication
- Facilities
- Equipment and supplies
- Record keeping

# CONSTRUCTIVE FEEDBACK

- Describe, Don't Label
- Don't Exaggerate
- Non-Judgmental
- Use "I Feel" Statements
- State Consequences Clearly

# CORRECTIVE FEEDBACK

- Analyze performance
- Identify correct and incorrect components
- Provide specific information
- Student improves performance
- Give positive feedback

# LEGAL IMPLICATIONS

## 3

- **Harassment** ◄
- **Discrimination** ◄
- **Americans with Disabilities Act of 1992 (ADA)** ◄
- **Confidentiality** ◄
- **Recourse** ◄
- **Negligence** ◄
- **Occupational Health and Safety Act (OSHA)** ◄
- **Documentation** ◄

# LEGAL IMPLICATIONS

## *OVERVIEW*

**Suggested instructional time for this lesson:** 1-1/2 hours

### Introduction

Legal and ethical issues are a vital element of daily life for emergency medical personnel. What should an emergency medical technician (EMT) do if an accident victim refuses care? Can a child be treated when her parents are not at home? These issues arise daily for EMS professionals. It is important to familiarize instructor trainees, not only about those issues which, through legislative action, regulate employment practices, but also about legal issues that apply in a training environment.

### Lesson Objectives

Through group discussion and question and answer sessions, the EMS instructor trainee will be able to:

- Define harassment and explain how the law applies to instructors
- List the elements of an equal opportunity statement
- Describe informal and formal grievance procedures
- State two responsibilities instructors must fulfill toward students
- State the four essential elements in a claim of negligence and explain each
- State three duties of the instructor that, if breached, could result in a negligence claim

### Materials Needed

- Overhead projector and screen
- Flipchart (prepared objectives)
- Flipchart and markers

### Instructional Strategies

- Lecture
- Discussion
- Question and Answer
- Visual Aids
- Activities
- Guest Lecturer

*INSTRUCTOR NOTES*

**Go over objectives** using a flipchart prepared before class. Post prominently in the room.

**Ask** a question

Ask class for possible problems.

*LESSON PLAN*

## Lesson Objectives

### I. EMS Instruction

A. Exponentially increased impact

B. Possible problems in the EMS system

- Declining volunteerism
- Turf problems
- Political problems
- Budget problems

C. Responsibilities as EMS instructors

1. All contractual obligations must be met

*ADDITIONAL INFORMATION*

## I. The opportunity and responsibility of teaching

### A. Exponentially increased impact

By teaching, EMS instructors can do a great deal for their community. Each individual instructor can only care for a certain number of people, but through teaching others, many people can be trained to serve their communities.

By teaching, EMS instructors have a great responsibility. The well-being of every future patient of every student depends upon how well we do our jobs as teachers.

### B. Possible problems in the EMS system

1. Declining volunteerism
2. Turf problems
3. Political problems
4. Budget problems

Despite these problems, the EMS system works well. It works well because of the work you put into it.

### C. Responsibilities as EMS instructors

1. All contractual obligations must be met

All courses must be taught according to the proposed curriculum. If the course is due to meet every Tuesday and Thursday for 9 weeks, and the instructor dismisses the class early on Thursdays to coach his child's soccer team, could a student who fails the course and the state test sue you?

2. Clearly defined standards
3. Respectful and fair treatment

**Ask** a question

What legal issues have been addressed in the courses you've taken? Which do you feel should be emphasized?

## II. Legal issues and their classroom application

A. Regulation of employment practices

*ADDITIONAL INFORMATION*

2. Clearly defined standards

Students must know what is expected of them. They must also be kept up-to-date on their performance levels. Instructors must provide written notice of exactly why a student is deficient and what they can do, if anything to remedy the deficiency. They must be given a chance to have more than one evaluator check their work, to avoid "s/he doesn't like me" claims. This is particularly important if the evaluator works for a competitor or has other conflicts of interest.

3. Respectful and fair treatment

Students and instructors have the right to be treated with respect and to receive fair treatment. If a conflict arises, the parties involved are encouraged to follow an appropriate grievance procedure. Grievance procedures may be available through the facility where the course is held or within state and local organizations sponsoring the course. If no procedure has been formalized, it is advisable to create one. See the section below for more information about both informal and formal processes.

## II. Legal issues and their classroom application

Instructors will be held accountable for transgressions in the classroom in much the same way as employers and workers are accountable in the workplace.

### A. Regulation of employment practices

For issues that specifically regulate employment practices and not training environments, instructors need to be aware of legislation and inform students. National Standard Curriculum courses are performance-based, used to prepare EMS professionals for on-the-job experiences. Guidance on applicable legal issues, such as patient care and consent, are included in many of the National Standard Curriculum courses. Even when course materials do not include specific information on legal concerns, instructors should take a proactive, preventative stance. Consult with the institute or sponsoring agency counsel for state-specific laws, regulations, and for the interpretation of policy. In the discussion of negligence later in this lesson, we will look at both the work environment application and negligence in the classroom.

*INSTRUCTOR NOTES*

**Ask** a question

Ask students for their definitions of harassment and list them on the board.

*LESSON PLAN*

B. Instructor accountability

## III. Harassment

A. Types of harassment

B. Sexual harassment

1. Definition

### B. Instructor accountability

Instructors need to be aware that they will be held accountable for their behavior. Practices, standards, and behaviors that are regulated or proceduralized will be discussed in this lesson in terms of the legal recourse that can be taken for alleged misconduct. Additionally, the organization sponsoring the training, for which the instructor functions as a representative, can also be held liable for instructor misconduct, as well as the facility in which the course is being held.

## III. Harassment

### A. Types of harassment

Harassment includes all behavior that serves to embarrass, demean, disgrace, humiliate, or intimidate another. Even though some behavior may seem acceptable, if it is embarrassing or intimidating to another, it constitutes harassment. Therefore, as an instructor, professional conduct is essential. Racy jokes may be welcomed by some, but they are inappropriate in the classroom, because they may offend others. Remarks intended as a joke may be intimidating to a sensitive student, e.g., kidding about an exam grade.

### B. Sexual harassment

Sexual harassment is illegal in the workplace and the classroom, according to *Title VII of the 1964 Civil Rights Act*. Instructors must be aware that their behavior, even if intended as friendly banter, can be misinterpreted. Individuals who believe themselves to have been sexually harassed have recourse through the legal system.

### 1. Definition

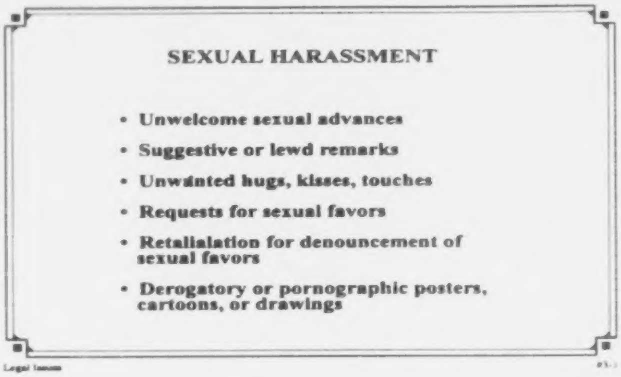
Sexual harassment is defined as any unwelcome sexual advances, requests for sexual favors, or conduct of a sexual nature when:

- Submission is implicitly or explicitly made a condition of employment
- Submission/rejection is used as the basis for an employment decision
- Conduct substantially interferes with work performance

*INSTRUCTOR NOTES* *LESSON PLAN*

**Display** OH #3-1

2. Examples



**SEXUAL HARASSMENT**

- **Unwelcome sexual advances**
- **Suggestive or lewd remarks**
- **Unwanted hugs, kisses, touches**
- **Requests for sexual favors**
- **Retaliation for denouncement of sexual favors**
- **Derogatory or pornographic posters, cartoons, or drawings**

Legal Issues #3-1

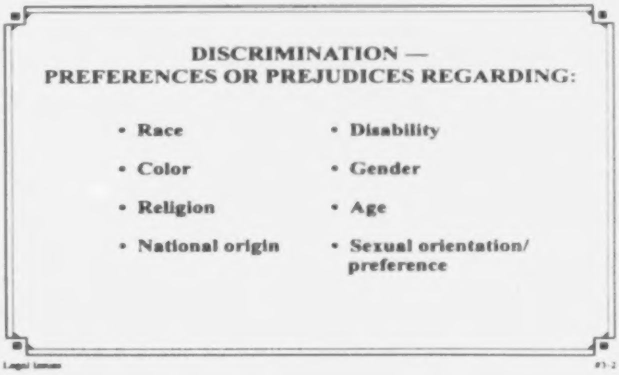
**Ask** a question

Do you know of any cases of sexual harassment in your EMS community?

## Discrimination IV.

**Display** OH #3-2

A. Preferences vs. prejudices



**DISCRIMINATION —**
**PREFERENCES OR PREJUDICES REGARDING:**

- **Race**
- **Color**
- **Religion**
- **National origin**
- **Disability**
- **Gender**
- **Age**
- **Sexual orientation/ preference**

Legal Issues #3-2

B. Equal opportunity statement

*ADDITIONAL INFORMATION*

- Conduct creates an intimidating, hostile, or offensive environment

2. Examples

Some behaviors that have been identified as sexually harassing are:

- Unwelcome sexual advances
- Suggestive or lewd remarks
- Unwanted hugs, kisses, touches
- Requests for sexual favors
- Retaliation for complaining about sexual harassment
- Derogatory or pornographic posters, cartoons, or drawings

## IV. Discrimination

### A. Preferences vs. Prejudices

Everybody has individual preferences. Discrimination occurs when preferences lead to the unfair treatment of other individuals who may have different preferences or attributes. Preferential treatment of a favorite student is another form of discrimination. All students should be treated equally.

### B. Equal Opportunity statement

The EMS community is committed to the principle that access to study or employment opportunities be accorded to each person on the basis of individual merit and without regard to race, color, religion, national origin, disability, gender, sexual orientation/preference, or age (except where these factors are bona fide occupational qualifications).

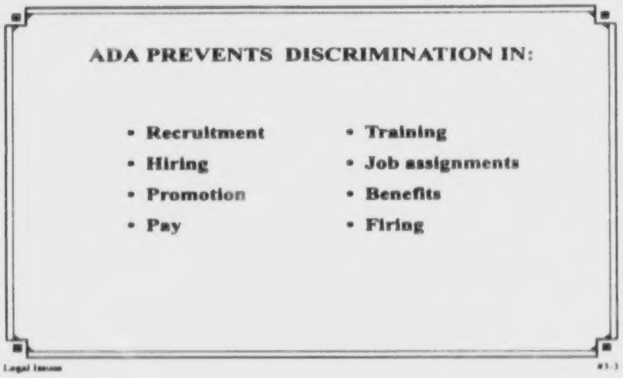
*INSTRUCTOR NOTES*

**Display** OH #3-3

*LESSON PLAN*

C. Americans with Disabilities Act (ADA)

1. Purpose of the Act



**ADA PREVENTS DISCRIMINATION IN:**

- Recruitment
- Hiring
- Promotion
- Pay
- Training
- Job assignments
- Benefits
- Firing

Legal Issues

#3-3

2. Definitions

- Disability
- Major life activities
- Essential job function
- Reasonable accommodation

3. Job analysis and functional job descriptions

*ADDITIONAL INFORMATION*

## C. Americans with Disabilities Act of 1992 (ADA)

1. Purpose of the Act

Specific legislation prevents discrimination against mentally or physically challenged individuals, under the Americans with Disabilities Act of 1992 (ADA). The intent of ADA is to prevent job discrimination in all employment practices, including recruitment, hiring, promotion, training, pay, job assignments, benefits, firing, etc.

ADA specifically addresses the employment of a qualified applicant with a disability, who can perform essential job functions, with or without reasonable accommodation. NOTE: ADA does not impose affirmative action obligations.

2. Definitions

*Disability*: physical or mental impairment that substantially limits a major life activity.

*Major life activities*: hearing, seeing, breathing, performing manual tasks, walking, caring for oneself, learning, or working

*Essential job functions* are those basic job duties essential to performance.

*Reasonable accommodation* must be provided, unless it would be an undue hardship, defined as a significant difficulty or expense.

3. Job analysis and functional job descriptions

Functional job descriptions define exactly what the basic duties will be in specific jobs, such as a paramedic. These duties may include such things as lifting stretchers into an ambulance. If a person's disability precludes them from performing essential job functions, it is not discriminatory to refuse employment in that particular position.

Within the EMS profession, functional job descriptions have been identified via job analysis for specific positions. Each job analysis will include physical requirements and those additional skills deemed necessary to perform to a given level of competence. For example, the National Registry has

*INSTRUCTOR NOTES*

**Ask** a question

you aware of any discrimination that has occurred or was alleged to have occurred during an EMS course in your state?

Do you have any questions about discrimination?

*LESSON PLAN*

4. Entrance requirements for EMS training
5. Classroom application of ADA

## *ADDITIONAL INFORMATION*

conducted a job analysis for the EMT-Basic position. The results identified reading and interpretation as an essential skill for EMT-Basic and above. Refer to Appendix B for documentation of the National Registry's Purpose of Establishment as well as the job analysis for an EMT-Paramedic, including:

- Environmental conditions
- Worker characteristics
- Physical demands
- Comments
- Skill level requirements

4. Entrance requirements for EMS training

   Check with your State EMS office or the National Registry for additional functional job descriptions, accommodation policies, and the entrance requirements for specific EMS courses.

5. Classroom application of ADA

   In the event a mentally or physically challenged individual is enrolled in a course, instructors must make reasonable accommodation approved by the State EMS office to assure them of the full benefit of the instruction.

   ***Those accommodations made in the classroom may not be the same as those approved for certification.***

**Ask** a question

Can you give me an example of a breach of confidentiality?

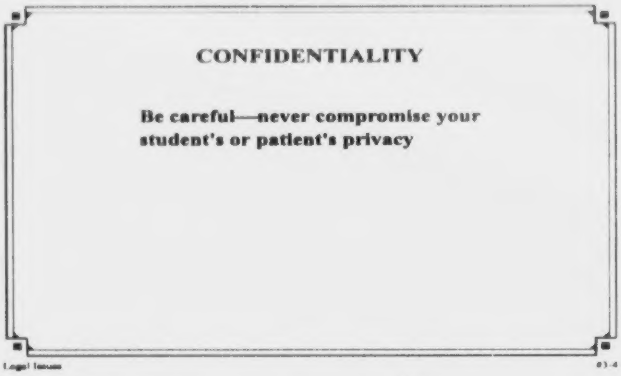
- Citing exam grades
- Compromising a patient's privacy

**Display** OH #3-4

## V. Confidentiality

A. Employment practices

B. Classroom application



CONFIDENTIALITY

**Be careful—never compromise your student's or patient's privacy**

Legal Issues #3-4

*ADDITIONAL INFORMATION*

## V. Confidentiality

Existing legislation regulates and establishes criteria for the release of confidential information.

### A. Employment practices

For the EMS practitioner, work-related confidential information includes patient histories, assessment findings, and treatment rendered. Written permission, signed by the patient, is required for release, except for specific exceptions.

### B. Classroom application

In the classroom, access to education records is limited to students and when under 18 year of age, to their parents. Education records include files and other documents containing information directly related to each student, and are maintained by an institution or organization. Information such a student's name, address, telephone number, major field of study, etc. may be released if the institution gives public notice of intention to publish and the student does not object. Students and their parents *must* be allowed access. Exceptions to the restrictions can be made to school officials with legitimate educational interest, for studies in which the records are purged of personally identifying data, and by judicial order.

Instructors must be careful when using examples in class not to reveal any information that compromises a patient's privacy. This admonition also applies to information about your students. It is inappropriate, for example, to mention exam grades within the hearing of other students.

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| **Ask** a question<br>Is anyone aware of standard grievance procedures for your locality, state, or specific institutions? | **VI. Recourse**<br>A. Purpose<br>B. Grievance Processes<br>1. Informal<br>2. Formal |

*ADDITIONAL INFORMATION*

## VI. Recourse

### A. Purpose

Individuals have recourse against unfair treatment. If discrimination results in adverse circumstances for a student, such as the inability to complete a course of study, legal recourse may be appropriate. For example, if an instructor's behavior, comments, or attitude substantially interferes with learning by creating an intimidating, hostile, or offensive environment, a student could have the instructor removed from the faculty through a grievance procedure and could invoke a civil suit for damages.

### B. Grievance Processes

Grievance procedures are established processes that can be used to redress perceived wrongs, whether it involves personnel, course administration, evaluation, or other students. These can be informal or formal processes.

1. Informal process

The first step in trying to resolve a complaint through an information process is to go to the other party involved, if that would not cause undue stress or adverse repercussions (such as confronting a sexual harasser). The next step is to bring the issue to the attention of other individuals responsible for the course, in an effort to seek informal resolution.

2. Formal process

If attempts to resolve the conflict informally are unsuccessful, or if the individual chooses not to seek redress informally, it is important that a formal grievance procedure be filed. The filing should specify exactly to whom a written complaint should be directed, as well as the detailed information that should be included in the complaint. It must also specify when, and in what form, the complainant will receive a response.

Typically, a written complaint would detail (1) the event(s) and fact(s) upon which the complaint is based and (2) the issue(s) in question.

*INSTRUCTOR NOTES* *LESSON PLAN*

## VII. Negligence

A. Context of responsibilities

1. To whom are we responsible?

   - To our students
   - To our students' patients

2. Relationships between all parties

   - Institutes
   - Clinical sites
   - Hospitals

3. Gray areas in the law

   - Law is hard to find
   - Not many cases have been decided
   - Claims are being made, but they don't always go to court
   - Law is dynamic, always changing

117

*ADDITIONAL INFORMATION*

A student may not agree with the results of an evaluation. For example, if a student fails the practical exams required by most states to practice specific EMS functions, the student can challenge exam.

## VII. Negligence

As an instructor of EMS personnel, it is your responsibility to prepare your students to face the reality of functioning within the health care field and the all of the special risks and responsibilities that entails.

### A. Context of responsibilities

1. To whom are we responsible?

   - To our students
   - To our student's patients

2. Relationships between all parties: institutes, clinical sites, hospitals, etc.

3. "Gray areas" in the law

   - Not many cases decided
   - Law is hard to find
   - Claims being made, but they don't go to court
   - Law is dynamic, always changing

113

*INSTRUCTOR NOTES*

**Ask** a question

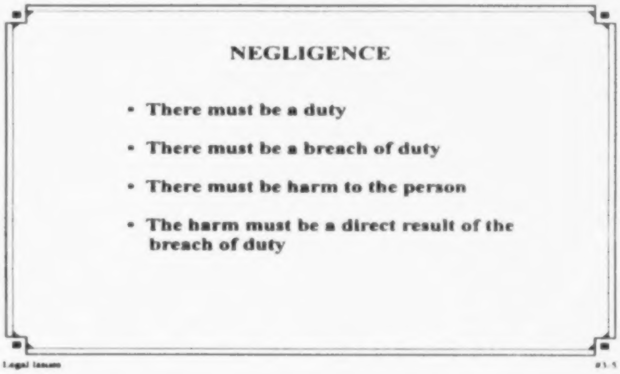
Who can tell me the elements necessary to a claim of negligence?

**Display** OH #3-5

*LESSON PLAN*

4. Can I be sued?
    a. Examples
    b. Lawsuits against EMS personnel can and do occur
        (1) Vehicle operations
        (2) Poor patient care

B. Four elements of negligence



**NEGLIGENCE**

- There must be a duty
- There must be a breach of duty
- There must be harm to the person
- The harm must be a direct result of the breach of duty

Legal Issues

#3-5

## *ADDITIONAL INFORMATION*

4. Can I be sued?

a. Examples

If a plumber's work can be found negligent, the people who have water damage can sue. People in wrecks are entitled to be fairly compensated for their loss. If a doctor, adequately trained, fails to function according to that training, e.g., cuts off the wrong leg, prescribes medicines with a serious side effect, go about an operation incorrectly, s/he can be sued.

b. Lawsuits against EMS professionals can and do occur

(1) Vehicle operations

Most common cases involve vehicle operations. Safe driving is critical. An Ohio medic was convicted for his part in a vehicle wreck and was sent to jail.

(2) Poor patient care

EMS professionals also get sued for poor patient care, just like doctors, hospitals, and nurses

**B. Four elements of negligence**

1. There must be a duty

2. There must be a breach of duty

3. There must be harm to the person

4. The harm must be a direct result of the breach of duty

*INSTRUCTOR NOTES*

**Ask** a question

Describe the duties of an EMS professional to his or her patients.

**Write** on flipchart

Record responses on a flipchart labelled Duties.

**Ask** a question

Ask students what breach of duty means.

*LESSON PLAN*

C. Duty

1. Moral vs. legal duty

2. Due care

3. Standard of care

   a. Differs from standard for physicians or nurses

   b. How and where standard is established for EMS providers

D. Breach of duty

1. Gross negligence is the criteria in some states, not just mere or regular negligence. However, gross negligence remains undefined, except by juries.

## ADDITIONAL INFORMATION

C. **Duty**

1. Moral vs. legal duty

Does anyone owe a duty to a blind person walking toward traffic? When does the law impose a duty on EMS personnel? Do we have to stop at every wreck? Do we have to help a person who "goes down" in a K-Mart? NO. We don't have to stop at every wreck, or help every injured person, just because we have the training. However, if and when we do get involved, then we have a duty to the patient.

2. Due care

We owe the patient the duty of due care. We must take care of the patient the same way any other reasonably proficient person of similar training would take care of the person, i.e., a doctor must care as other doctors, and so on.

3. Standard of care

a. Differs from standard for physicians and nurses

The standard of care for EMS personnel is not the same as for a doctor or a nurse. We are compared to other reasonably trained, reasonably proficient EMS care providers.

b. How and where standard is established for EMS providers

The descriptions for standard of care procedures for EMS personnel can be found in textbooks and Department of Health materials such as skill sheets. Expert witnesses, such as EMS professionals with substantial experience, can also establish what a reasonably trained, reasonably proficient EMS provider would do.

D. **Breach of duty**

1. Gross negligence is required in some states, not just mere or regular negligence. However, gross negligence remains undefined, except by juries. The criteria include whether the EMS personnel's actions represented a significant departure from the standard of care.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | 2. Duty of due care can be breached by acts or commissions<br>3. Informed consent<br>a. Refusal of treatment<br>b. Refusal forms<br>E. Documentation on the job<br>1. What to document<br>2. Guidelines for documentation |

123

## *ADDITIONAL INFORMATION*

2. Duty of due care can be breached by acts or omissions (failure to act).

   Any investigation will attempt to find what care was given and why, as well as what care was not given and why not. Most law suits regarding patient care are brought for the failure to act when some action should have been taken.

3. Informed consent

   Informed consent means that a person is given reasonable detailed information about what is going to happen and what the consequences are. For example, "I would like to start an IV. Have you ever had one before? This will hurt a little when I do it, but it will enable me to give you medications and fluids via the most direct route. All right?"

a. Refusal of treatment—if a patient refuses treatment, advise them of the worst possible consequences. They must be informed of the consequences of not accepting treatment.

b. Refusal forms—protect yourself by having them sign a refusal form, if they are able. Have it witnessed by as many witnesses as possible, and even by their family. This highlights the absolutely critical need for thorough documentation.

**E. Documentation on the job**

1. What to document

   Get a patient's baseline and change of condition data. For your own protection, get trip sheets, because prehospital charts are inadequate. They only ask you to state what you did and perhaps why. They do not ask you to explain what you did not do and why. If you decide not to do something that could be considered reasonable treatment, document your reasons. The rule is, if it isn't written down, it didn't happen.

2. Guidelines for documentation

   These reports should be kept forever. However, the statute of limitations is 2 years, or for minors, 2 years after their 18th birthday.

F. Harm

1. The person must be harmed

2. The harm must be the direct result of the breach of the standard of care

G. Measure of damages

1. Medical bills

2. Lost wages

3. Loss of life's pleasure, quality of life, and pain and suffering

**Conduct** activity

In this activity, participants will use what they have learned about the definition of negligence to evaluate potential liability in a series of classroom-based scenarios.

H. Activity 3.1—Negligence

1. Break participants into small groups (3-4 people), and ask the groups to select a timekeeper and a reporter (preferably people who have not done so before).

2. Show overhead #3-5. Review four elements of negligence.

3. Ask participants to turn to the scenarios for Activity 3.1 in Appendix A.

4. Each group will have 20 minutes to identify level of liability *and the basis for liability.*

5. When time is up, moderate discussion on liability for each scenario.

125

*ADDITIONAL INFORMATION*

**F. Harm**

1. The person must be harmed

   Even if you do something, for example, drop a patient or fail to immobilize them, if your action did not harm them, they do not have an essential component of negligence.

2. The harm must be a direct result of the breach of the standard of care

   It may be difficult to sort out what injury resulted from a breach of standard and what was incurred from the injury the EMT is treating. Resolution is often obtained through expert testimony.

**G. Measure of damages**

If negligence is proven, there are a variety of damages.

1. Medical bills

2. Lost wages

   For example, a 25 year old person, at $25,000 per year, for 40 years, equals 1 million.

3. Loss of life's pleasures, quality of life, pain and suffering

**H. Activity 3.1—Negligence**

Refer to the scenario cards in Appendix A.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | I. Good Samaritan Law<br>J. Why do people sue, and how can I prevent it? |
| | **VIII. Occupational Health and Safety Act of 1970 (OSHA)** |
| | A. Purpose<br>B. Instructors should educate students regarding applicable regulations |

127

*ADDITIONAL INFORMATION*

### I. Good Samaritan Law

Local statutes apply.

### J. Why do people sue, and how can I prevent it?

People sue because they are mad and feel that they have been poorly treated. People do, however, accept human mistakes. If you make a mistake, admit it, be humble, and apologize. Be nice to all patients. And never talk crudely or rudely about an unconscious patient. It will come back to haunt you.

## VIII. Occupational Health and Safety Act (OSHA) of 1970

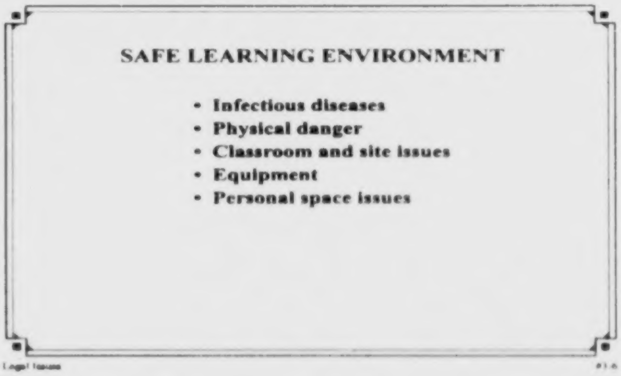
### A. Purpose

The Occupational Health and Safety Act (OSHA) of 1970 regulates employment environments and practices to ensure the health and safety of our nation's workforce. These regulations are enforceable by law and penalties will be applied for non-compliance. The law applies to employers, who must make the place of employment free of recognized hazards and comply with OSHA standards, and employees, who must comply with the standards that apply to their conduct on the job.

### B. Instructors should educate students regarding applicable regulations

EMS instructors need to make students in EMS courses aware of applicable on-the-job OSHA regulations for the courses they teach. For example, OSHA regulates procedures and practices for employee protection regarding exposure to blood-borne pathogens. Instructors teaching courses in which this is an issue should educate students during course delivery.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| **Ask** a question<br>What are our duties to our students in the classroom? | **IX. Negligence in the Classroom** |
| **Display** OH #3-6 | A. Duty to provide a safe learning environment |



**SAFE LEARNING ENVIRONMENT**

- **Infectious diseases**
- **Physical danger**
- **Classroom and site issues**
- **Equipment**
- **Personal space issues**

Legal Issues

#3-6

*ADDITIONAL INFORMATION*

## IX. Negligence in the Classroom

### A. Duty to provide a safe learning environment

- Infectious diseases

  Instructors have a duty to their students to take reasonable, adequate precautions to maintain an environment free of infection. This includes appropriate cleaning of CPR mannequins and protection from needle sticks, e.g. AIDs.

- Physical danger

  EMS courses involve a certain amount of risk. Instructors must take reasonable precautions to protect students from physical danger and inform them of potential risks. For example, extraction day, lifts, and carries all pose a potential threat. Instructors should make every effort to ensure that the students are physically able to complete a task as well.

- Classroom and site issues

  Instructors should attempt to safeguard students' well-being when the class location may pose a danger, e.g., snow covered stairs or a potential fall in the pole room of a fire house. An incident like this actually occurred, in which people had a scenario set up in a pole room in a fire hall. It was dark. Students were told there was a victim in the room and when they entered the room one of the students fell through the hole.

- Equipment

  Class equipment should be in good working order. Old equipment should be replaced, e.g, rescue equipment, long spine board.

- Personal space issues

  Instructors of EMS curriculum have a responsibility to instruct students in appropriate and respectful interaction with another, particularly when the situation requires physical contact that may be embarrassing to another. In the extreme, it is possible that inappropriate patient assessments could be interpreted as sexual assault or harassment.

*INSTRUCTOR NOTES*

**Ask** a question

Who can tell me about the doctrine of assumed risk?

- Person must be warned
- Person proceeds anyway
- Person is injured by the identified danger

*LESSON PLAN*

B. Duty to warn

C. Doctrine of assumption of risk

D. Duty to provide adequate instruction

## ADDITIONAL INFORMATION

As stated before, not only must you never talk rudely or crudely to an unconscious patient, you must never touch any patient, or speak about them, in a crude or rude manner. As students interact, it is the instructors responsibility to ensure that this standard of behavior is enforced in the classroom. Although students can be held responsible for their own behavior, an instructor will be held accountable for a failure to maintain a safe learning environment as well.

**B. Duty to warn**

Where there are risks, we must warn our students and protect them. Proper warning and reasonable precautions will help in our defense, in the event of injury or disease.

**C. Doctrine of assumption of risk**

- Person must be warned
- Person proceeds anyway
- Person is injured by the identified danger

In a case where it can be established that the student knowingly assumed the risk, recovery is not available under the law.

**D. Duty to provide adequate instruction**

This is a gray area under the law, for the same reasons stated above: there are not many precedents, precedents are hard to find, cases are being settled out of court, and the law is dynamic and always changing. As we've discussed, juries do and will continue to decide these cases as they appear in courts of law. The question is, "Do you think there would be people on a jury that would say we had a duty to teach students according to established standards of care? Do you think that a judge might find that we had a duty?"

Here are some examples to consider:

WHAT IF WE TAUGHT ...

... students to toss I.V. needles in the garbage and someone contracted AIDs cleaning out the rig?

**Ask** a question

Do you have any questions about negligence and how it applies in the classroom?

E. Duty to the students' future patients

## X. Increasing documentation and other safeguards

Use the list of questions to help define areas of needed improvement:

- How well drafted are your clinical agreements?
- Who is responsible for the student while on clinical rotation?
- Who does the student turn to if there are problems?
- Are all of these policies in writing?
- What insurance requirements do you have for the students?
- Are the program administrators insured if a student inadvertently hurts a patient?
- Are the individual instructors insured?

*ADDITIONAL INFORMATION*

... students the wrong technique in tying off, or failed to instruct them to keep clear during a defibrillation?

### E. Duty to the student's future patients

The same question applies here as well; will juries and judges determine the instructor had a duty. In all probability, there will be claims and the courts will find a duty. Injured people are looking in all directions for someone responsible for their injuries who may be able to pay some of the astronomical hospital bills.

## X. Increasing documentation and other safeguards

Prudence demands that we do all that we can to protect ourselves, our students, and our student's future patients. Use the list of questions to help define areas of needed improvement.

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*INSTRUCTOR NOTES*

**Ask** a question

Tell me which records you feel it is important to keep.

**Write** on flipchart

Record responses on a flipchart labelled Records. Then use this list to fill in any blanks.

- Attendance records
- Class outlines for each of the classes taught
- Copies of each handout
- Skill verification record
- Examination and reexamination records

*LESSON PLAN*

A. Types of records

B. Communication

1. Between instructors
2. To course coordinator
3. Establish what happened

## XI. Summary

*ADDITIONAL INFORMATION*

**A. Types of records**

Identify essential records and ensure the system includes an adequate recordkeeping process.

**B. Communication**

1. Between instructors

Instructors should discuss with one another what was covered, what was omitted and why, and what seemed to give the students problems. These items should be documented.

2. To course coordinator

Individual student deficiencies should be reported—confidentially—to the course coordinator as well as the student.

3. Establish what happened

This communication and documentation establishes exactly what the course material contained and whether the student's performance was reasonable proficient for that level of training. You should have dates documented, so that in response to a charge of negligence, you can clearly state something like this, "Yes, that subject was covered on January 20, 1992. The student was instructed to perform the procedure in this manner."

## XI. Summary

The intention of this lesson is to increase awareness regarding issues with legal implications. By no means should the information contained here be construed as legal advice in a specific circumstance. Specific legal advice regarding the status of a particular incident should be obtained from private counsel.

*INSTRUCTOR NOTES* *LESSON PLAN*

**References**

## *ADDITIONAL INFORMATION*

### References

Westlaw Electronic Research: 1232g. Family Educational and privacy rights (access of records)

Richard A. Hernan, Jr., Attorney at Law.

Bill Meadows, Manager of Division of Educational Development, Office of EMS, Virginia Department of Health.

# SEXUAL HARASSMENT

- **Unwelcome sexual advances**
- **Suggestive or lewd remarks**
- **Unwanted hugs, kisses, touches**
- **Requests for sexual favors**
- **Retalialation for denouncement of sexual favors**
- **Derogatory or pornographic posters, cartoons, or drawings**

## DISCRIMINATION — PREFERENCES OR PREJUDICES REGARDING:

- Race
- Color
- Religion
- National origin
- Disability
- Gender
- Age
- Sexual orientation/ preference

# ADA PREVENTS DISCRIMINATION IN:

- Recruitment
- Hiring
- Promotion
- Pay
- Training
- Job assignments
- Benefits
- Firing

# CONFIDENTIALITY

**Be careful—never compromise your student's or patient's privacy**

# NEGLIGENCE

- There must be a duty
- There must be a breach of duty
- There must be harm to the person
- The harm must be a direct result of the breach of duty

# SAFE LEARNING ENVIRONMENT

- Infectious diseases
- Physical danger
- Classroom and site issues
- Equipment
- Personal space issues

# THE ADULT LEARNER

## 4

Learning Theory ◄
Characteristics of Adult Learners ◄
Learning Styles ◄
Student Skills for Success ◄

# THE ADULT LEARNER

## *OVERVIEW*

**Suggested instructional time for this lesson:** 2 hours

### Introduction

To maximize his or her effectiveness in the classroom, the instructor must understand the principles of adult learning and the various styles in which adults learn. The instructor's presentation must reflect, and constantly adapt to, the styles in which adults learn.

### Lesson Objectives

Through group discussion and question and answer sessions, the EMS instructor trainee should be able to:

- Define learning
- Describe the three major learning theories
- Describe four characteristics of adult learners
- Create auditory, visual, and kinesthetic learning activities
- List 5 study skills
- List 5 test-taking skills

### Materials Needed

- Overhead projector and screen
- Overhead projector markers
- Flipchart and markers
- Appendix B

### Instructional Strategies

- Lecture
- Discussion
- Question and answer
- Visual aids

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# THE ADULT LEARNER

*INSTRUCTOR NOTES*

**Go over objectives** using a flipchart prepared before class. Post prominently in the room.

**Display** OH #4-1

**Ask** a question

What are some variables that affect learning?

**Write** on flipchart

Write participant ideas on a flipchart page titled "Learning."

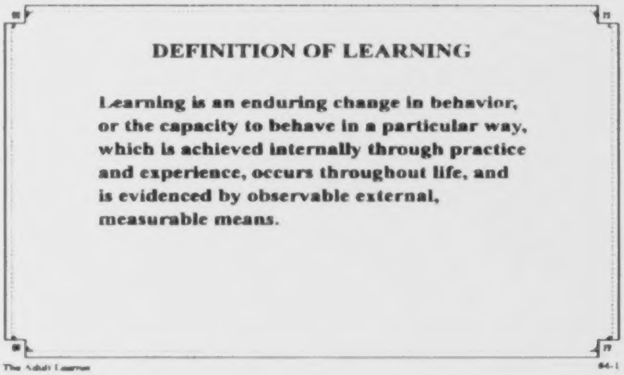
Refer students to Reference 4-2 in Appendix B and discuss.

*LESSON PLAN*

## Lesson Objectives

I. Learning

A. Definition



**DEFINITION OF LEARNING**

**Learning is an enduring change in behavior, or the capacity to behave in a particular way, which is achieved internally through practice and experience, occurs throughout life, and is evidenced by observable external, measurable means.**

The Adult Learner

#4-1

B. Conditions for learning

1. Previous experience
2. Attitude\Motivation
3. Stimulus

*ADDITIONAL INFORMATION*

## I. Learning

### A. Definition

There are many different definitions of learning. Although these definitions do not say exactly the same thing, there are certain core elements that should be part of any definition of learning. Learning:

- is a lasting change in behavior
- results from practice or experience
- is the capacity to behave in a particular manner
- occurs throughout life
- is an internal change that is measurable externally.

### B. Conditions for learning

The degree to which behavior changes depends on several conditions. The first condition is previous experience. Are the prerequisite skills and knowledge in place so that learning can occur?

The second condition is attitude or motivation to learn. Learning will occur to the degree a person wants, or has incentive, to change his/her behavior. This is generally not a problem with educating adult learners because they choose to participate for specific reasons, e.g., job requirement, helping others, civic responsibility.

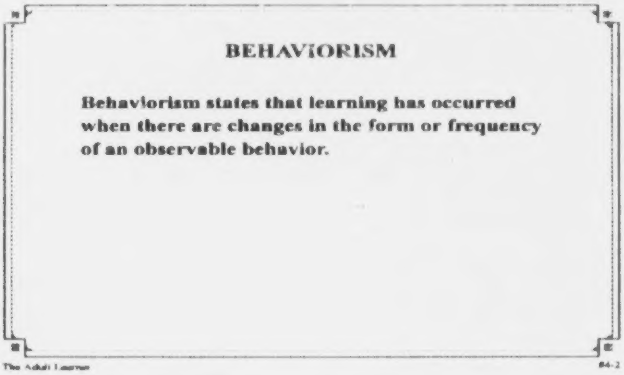
The third condition is the appropriate stimulus (instructional method) which, when applied, facilitates optimal learning. For example, imagine you are teaching CPR and the instructional strategy is lecture supported by a "how to" pamphlet, but no "hands on" experience. Your instruction probably will be less effective for first time CPR students than an instructor whose instructional approach includes practice with a mannequin. Cognitive knowledge as well as psychomotor skills are critical to the proper administration of the CPR technique. CPR training is more effective when participants are able to practice the process and procedures.

*INSTRUCTOR NOTES* | *LESSON PLAN*

## II. Learning Theories

**Display** OH #4-2

A. Behaviorism



### BEHAVIORISM

**Behaviorism states that learning has occurred when there are changes in the form or frequency of an observable behavior.**

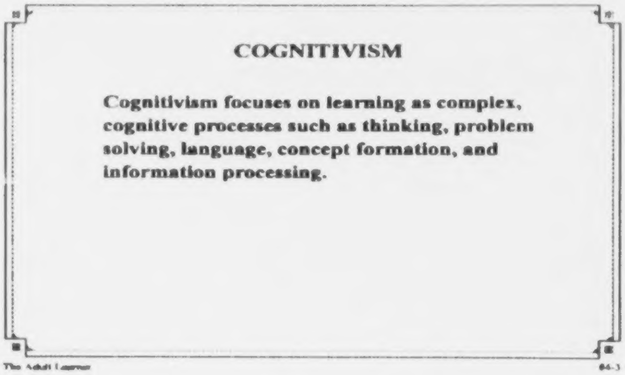
The Adult Learner

#4-2

1. How learning occurs
2. Factors influencing learning

**Display** OH #4-3

B. Cognitivism



### COGNITIVISM

**Cognitivism focuses on learning as complex, cognitive processes such as thinking, problem solving, language, concept formation, and information processing.**

The Adult Learner

#4-3

*ADDITIONAL INFORMATION*

## II. Learning Theories

There are three major learning theories in education today: behaviorism, cognitivism, and constructivism. It is important for an instructor to have a general understanding of what these theories are, and how they relate to instruction and/or preparation for instruction. Specifically, as an EMS instructor, you will be teaching a wide range of knowledge, skills, and abilities. Knowledge of learning theories will help you to understand how and why learning occurs differently for different types of tasks and people.

Generally stated, a learning theory is an organized set of concepts, principles, and strategies that explains the process of learning and methods to facilitate learning.

### A. Behaviorism

Behaviorism states that learning has occurred when there are changes in the form or frequency of an observable behavior.

1. How learning occurs

Learning occurs when the appropriate response is performed after a specific stimulus has been applied. Behaviorism focuses on the association between the stimulus and the response, and how that connection is made, strengthened, and maintained. The classic example of behaviorism is that of the scientist Pavlov's dog. Pavlov rang a bell each time he fed his dog. After awhile, the dog would salivate (response) just from hearing the bell (stimulus). An EMS example would be the increase in heart rate and adrenalin in response to a siren.

2. Factors influencing learning

The learner, the environment (factors and conditions), and reinforcement influence how we learn. The most important of these factors is the environment, and how stimulus and reinforcement for correct performance are arranged within it.

### B. Cognitivism

Cognitivism focuses on learning as complex cognitive processes such as

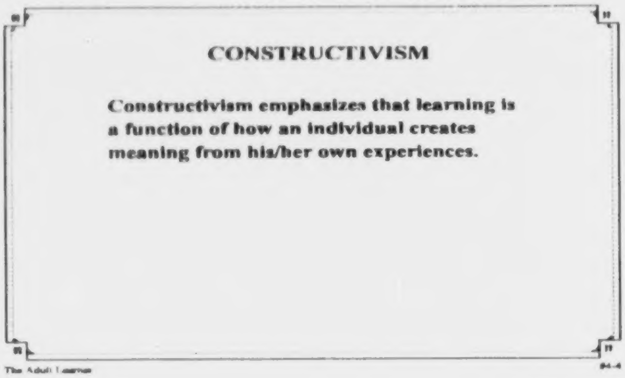
*INSTRUCTOR NOTES*

*LESSON PLAN*

1. How learning occurs
2. Factors influencing learning

**Display** OH #4-4

C. Constructivism



**CONSTRUCTIVISM**

**Constructivism emphasizes that learning is a function of how an individual creates meaning from his/her own experiences.**

The Adult Learner

#4-4

**Ask** a question

What factors affect the EMT's learning on the job?

- If you don't learn it and do it correctly, somebody could die
- Field conditions

1. How learning occurs
2. Factors influencing learning

thinking, problem solving, language, concept formation, and information processing.

1. How learning occurs

Cognitivism focuses on the acquisition of knowledge and the internal mental processes that facilitate learning. It also stresses the importance of how information is received, organized, stored, and retrieved by the mind.

2. Factors influencing learning

Like behaviorism, cognitive theory stresses the role of the environment in learning. Explanations, demonstrations, and examples all aid in the acquisition of knowledge. For learning to take place, participants must be active in the learning process. The difference between the two theories is that cognitivists believe that learning occurs because learners are attending to and perceiving significant features of the modeled behavior; not simply stimulus → response, as in behaviorism.

## C. Constructivism

Constructivism approaches learning and understanding from the view point that knowledge is a function of how an individual creates meaning from his/her own experiences.

1. How learning occurs

Both constructivism and cognitivism view learning primarily as a mental process; however, constructivists believe that individuals filter information from their environment and create meaning by relating the information to past experiences. For example, people can interpret information differently.

2. Factors influencing learning

The learner, the environment, and the specific interactions between these two factors influence whether learning occurs. The learner's past experience also plays a role in how he/she interprets new stimuli or situations. Like cognitivism and behaviorism, constructivism emphasizes demonstration, examples, and practice; however, constructivists believe demonstrations are critical to making the learner's experiences realistic and relevant.

*INSTRUCTOR NOTES*

**Conduct** activity

***NOTE:*** Significant preparation of materials prior to class are necessary for this activity.

Refer to the Activity 4.1 description page in Appendix A for complete instructions. Please note that an optional enhancement is included.

**Ask** a question

Does anyone have questions about learning theories?

*LESSON PLAN*

D. Learning theories change focus

E. Activity 4.1—Realistic Learning Tasks

1. Break into small groups.
2. Select a reporter and a facilitator.
3. Have fun.

*ADDITIONAL INFORMATION*

### D. Learning theories change focus

No one theory of learning is necessarily correct. Modern approaches to learning focus on realistic learning tasks that result in improved student performance. Use the points from each of the theories that are most effective for you and your students.

### E. Activity 4.1—The Apple Exercise

This activity demonstrates how learning and the application of learning is impacted when you move from "real" examples to relatively "unreal" or "symbolic" representations of a concept or task. This activity also demonstrates that there are kinesthetic, auditory, and visual (and even olfactory) aspects of learning. Methods of addressing each area are covered in depth later in this lesson.

*INSTRUCTOR NOTES*

**Ask** a question

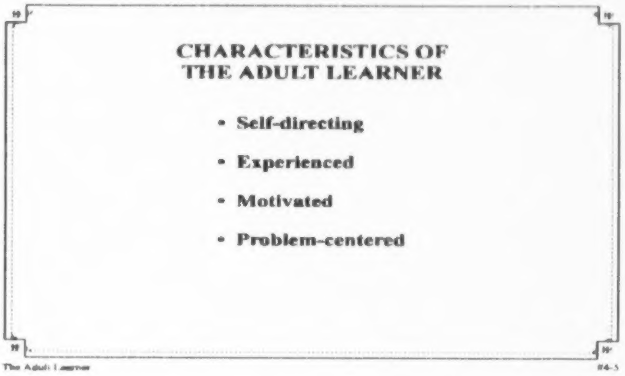
What do you think are characteristics of adult learners?

**Display** OH #4-5

*LESSON PLAN*

## III. Adult Learning

A. Characteristics of the adult learner



**CHARACTERISTICS OF THE ADULT LEARNER**

- **Self-directing**
- **Experienced**
- **Motivated**
- **Problem-centered**

The Adult Learner

#4-5

1. Self-directing
2. Experienced

*ADDITIONAL INFORMATION*

## III. Adult Learning

### A. Characteristics of the adult learner

Instructing adult learners is very different from teaching children. Your role in instructing adults tends to be that of a facilitator/instructor. Unlike children, most adults enroll in classes or training with specific objectives in mind. Listed below are some characteristics of adult learners and how an instructor might deal with these character traits.

1. Self-directing

This means that learners are active in the learning process and are able to determine their own learning needs. They learn best by doing, like to be involved in planning and conducting the training (when possible), respond to a friendly, informal, adult environment, like to be informed of their progress, and can assist in the evaluation of their own progress.

As an instructor, you must be aware of learners' objectives for seeking training, be supportive, and provide feedback on their progress. Your instructional strategies should be interactive and hands-on.

2. Experienced

The adult learner has experience and wants to share it with others. This experience is anchored in emotional frameworks consisting of values, attitudes, and tendencies.

As an instructor, you should relate new material to your learners' experiences, encourage them to share their experiences, but monitor the number of "war stories." Also, facilitate students' learning from each other, and most importantly, remember that learning may be difficult because it can require change in long-established values, attitudes, and tendencies that are based on prior experiences.

# THE ADULT LEARNER

*INSTRUCTOR NOTES* | *LESSON PLAN*

3. Ready to learn-motivated

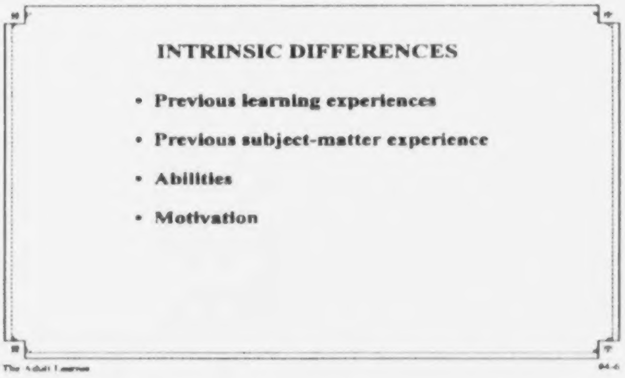
4. Problem centered

**Ask** a question

What do you think are some factors that would create individual learning differences?

**Display** OH #4-6

B. Intrinsic differences



**INTRINSIC DIFFERENCES**

- **Previous learning experiences**
- **Previous subject-matter experience**
- **Abilities**
- **Motivation**

The Adult Learner

#4-6

*ADDITIONAL INFORMATION*

3. Ready to learn - motivated

The adult learner is generally ready to learn (based on a need), wants to learn, will respond to a variety of instructional strategies, but may have very strong opinions or ideas on certain topics or content.

Motivation is increased when the subject matter is relevant to the immediate interests and concerns of the student.

4. Problem centered

Adults want to solve relevant, realistic problems, apply new information, and have the opportunity to discuss and solve current problems.

As an instructor, you should provide realistic examples and exercises, and give students the opportunity to practice. Adult students learn best by doing.

**B. Intrinsic differences**

Each student will come to the classroom with a different set of experiences, values, biases, knowledge, and skills. These differences can be attributed to the following factors:

1. Previous learning experience

    - Level (high school, college, etc.)
    - Type (vocational, military, etc.)
    - Experience (positive or negative)
    - Outcome (better job, raise, or no change)
    - Value (viewed as worthwhile or useless)

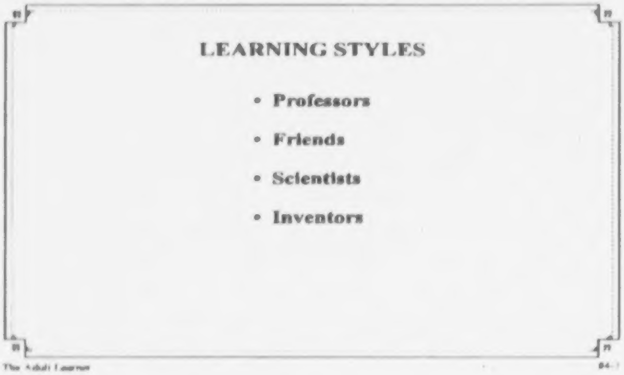
2. Previous subject matter experience

    - Related vocational field (R.N., CPR instructor, etc.)
    - Related education or training (military, biology major)

*INSTRUCTOR NOTES* | *LESSON PLAN*

**Display** OH #4-7

C. Learning styles



**LEARNING STYLES**

- **Professors**
- **Friends**
- **Scientists**
- **Inventors**

The Adult Learner #4-7

1. Professors

2. Friends

165

*ADDITIONAL INFORMATION*

3. Abilities

   - Sensory (e.g., sight, hearing)
   - Cognitive (e.g., problem solving)
   - Psychomotor (e.g., mechanical aptitude)

4. Motivation

   - Genuine interest
   - Job or promotional requirement
   - Self esteem

## C. Learning styles

In addition to intrinsic difference among learners, there are different styles of learning that as Instructors, we should be aware of. According to Garmston and Wellman there are some descriptive "personas" representative of the various learning styles.

1. Professors

The "professor's" goal is competence. This type of learner wants to master the information presented, so that he/she can recall it when necessary to perform tasks.

As an instructor, provide this type of student with facts, citations, examples, demonstrations, practice, detail, and feedback.

2. Friends

"Friends" want personal involvement and interaction with other participants. Their responses to topics are generally based on their experiences. Feelings and experiences are important to them.

As an instructor, provide group activities, real-world experiences and opportunities for students to share their experiences.

*INSTRUCTOR NOTES*

**Ask** a question

Ask students to raise their hands to indicate which learning style they think best represents them. Ask if they think they are representative of most EMS students.

Do you have any questions about characteristics of the adult learner or learning styles?

**Display** OH #4-8

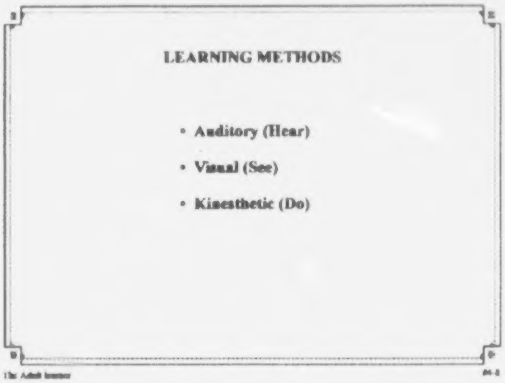
**Refer** to handout

Refer students to handout 4-1 in Appendix B. It is an example from EMT-Basic of the AVK concept of learning.

*LESSON PLAN*

3. Scientists
4. Inventors

D. Learning Methods—Use Your Sense(s)



LEARNING METHODS

- Auditory (Hear)
- Visual (See)
- Kinesthetic (Do)

The Adult learner

#4-8

*ADDITIONAL INFORMATION*

3. Scientists

"Scientists" will reason with the information presented to them because they want to understand and comprehend. It must make sense. They also like structure and organization.

As an instructor, make sure your presentation follows a logical, organized sequence. Also, once you give students data, ideas, and concepts, give them the opportunity to analyze processes or formulate explanation or theories. Allow them to inquire.

4. Inventors

"Inventors" are creative. They like to adapt, reorganize, and explore new ideas or ways of doing something.

Inventors can be a real challenge for an instructor, especially when there are strict processes and procedures that need to be followed, as with the EMS technical courses. However, whenever possible or appropriate, try to provide inventors with opportunities, such as individual and group exploration or creative self expression, to tap their creativity.

It is important to recognize that the learning styles described above are not absolutes. Most people are a mix of several types depending on the instructional content and instructional setting.

### D. Learning methods—Use Your Sense(s)

Learners can also be categorized according to how they prefer to have material presented to them. The three methods are auditory, visual, and kinesthetic. Some courses provided by NHTSA, such as the EMT-Basic Course, specify student activities for each lesson that are categorized by these three primary learning styles. Each method is described below:

- Auditory (Hear). These student activities provide instructional material in a verbal manner. Those students who learn best by hearing will benefit from this method of instruction. An example of this type of student activity is: Students should hear normal and abnormal airway noises.

*INSTRUCTOR NOTES*

**Conduct** activity

This exercise can provide the instructor with an informal method of evaluating , knowledge of the learning methods concept. This activity could also be conducted in small groups, with each group demonstrating in front of the class.

Topics could include:

- Make a snowman
- Ride a snowmobile
- How to ski
- Shovel snow

*LESSON PLAN*

E. Activity 4.2—Learning Methods

1. Provide topics, or ask students to think of a topic they can teach.
2. Ask students to think of ways to instruct the topic using auditory, visual, and kinesthetic activities.

*ADDITIONAL INFORMATION*

- Visual (See). These student activities provide instructional material in a visual manner. Visual learners will benefit from this method of instruction. An example of this type of student activity is: Students should see breathing while an initial assessment is being performed.

- Kinesthetic (Do). These student activities provide instructional material in a performance manner. Those students who learn best by doing will benefit from this method of instruction. An example of this type of student activity is: Students should practice assessing breathing.

An example from the EMT-Basic Course is provided in Appendix B.

### E. Activity 4.2—Learning Methods

1. Ask students to think of a topic they can teach (not necessarily EMS-related), e.g., water skiing.

2. Ask students to take 15 minutes and write ways to instruct the topic using auditory, visual, and kinesthetic activities.

   For example:

   *Auditory*

   - Hear changes in pitch of boat motor as skier is pulled up

   *Visual*

   - See equipment required
   - See correct posture demonstrated

   *Kinesthetic*

   - Practice putting on equipment
   - Practice correct skiing posture

3. Ask each student to read aloud his/her topic and activities to the class.

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*INSTRUCTOR NOTES*

**Ask** a question

Ask students what study skills they use that are helpful.

**Write** on flipchart

Write responses on flipchart.

*LESSON PLAN*

## IV. Learning Tools

A. Study skills

1. Note taking
2. Underlining/highlighting

## IV. Learning Tools

It will be common for you to have trainees who have not been classroom students for a while. This can be a source of anxiety for many people, but through coaching (instructor role) your students, you can build their confidence through encouragement and guidance. Explain the use of the following study aids and test taking skills.

### A. Study skills

Student materials provided with the DOT curricula will vary in quantity and level of detail. However, the following techniques can be used to improve students' study skills for any course of instruction.

1. Note taking

If students are not provided a course outline, they should follow the presentation structure, bulleting major topics and key points under those topics. If provided an outline, more extensive notes can be taken under the major topics and key points (if provided).

It is important that students DO NOT try and write down every word the instructor says. This takes their concentration away from learning the subject matter, and places it on writing notes.

As an instructor, you should be conscious of the speed of your presentation particularly when students have few supporting materials. Students will need more time to process the information presented and take notes. Deliver your material in small chunks, and make sure you allow time for questions.

2. Underlining/highlighting

When students are assigned outside reading or are following a presentation that has supporting materials, underlining or highlighting is a very useful learning tool. Students can indicate quickly what topics or points are important with little disruption of their cognitive processing of the presentation.

Highlighting important information in videos can be accomplished by mentally picturing yourself performing the skills and drawing the critical elements. As an instructor, help your students by noting important topics or key points.

*INSTRUCTOR NOTES*

**Ask** a question

Who has used recording devices to tape a lecture? Describe your experience.

*LESSON PLAN*

3. Outlining
4. Summarizing
5. Recording devices

*ADDITIONAL INFORMATION*

Your students are there to learn. It should not be their job to figure out what you feel is important.

3. Outlining

If student materials are not provided, a helpful technique is for students to review the notes they took in class, then develop an outline. This requires students to go over the presentation in their minds, then arrange it in a logical order. This process helps students identify areas of misunderstanding or particular importance.

4. Summarizing

Whether student materials are provided or not, it is always a good idea for students to summarize a presentation or lecture. Again, this requires students to reflect upon the presentation, review their notes, then describe what they have learned in their own words. Written summaries, as well as verbally discussing the material or reading aloud the information you want to remember are all effective summarizing techniques.

As part of the summarizing process, both instructors and students should tie in new information with what has already been learned. This provides mental "hooks" on which information can become more firmly attached.

5. Recording devices

Students may request to record your classes/lectures. This is common practice on college campuses, but an instructor must give his/her consent to the taping.

For students who need to pay close attention to lectures, but also need to take detailed notes, recording lectures is an excellent option. He/she can become an active participant in the lecture, then re-listen to the lecture for the purpose of taking notes. Another advantage is being able to listen to the tape while traveling. If a student has a long commute and little time to study, listening to lectures can be a way to make the time more productive.

*INSTRUCTOR NOTES*

**Generate** a discussion

Generate class discussion on what instructors can do to help students prepare for a big test.

**Display** OH #4-9

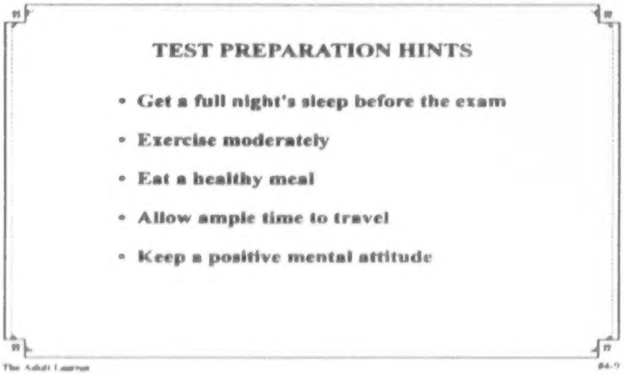
**Ask** a question

Do you have any questions about adult learners or adult learning tools?

*LESSON PLAN*

6. Study environment

B. Test taking skills



**TEST PREPARATION HINTS**

- Get a full night's sleep before the exam
- Exercise moderately
- Eat a healthy meal
- Allow ample time to travel
- Keep a positive mental attitude

The Adult Learner

#4-9

*ADDITIONAL INFORMATION*

As an instructor, you must decide if you will allow students to tape your classes. In general, it is not a problem. However, be aware that you can be held liable for what is on the tapes. Additionally, if you feel taping will change how you deliver your course, or make you feel uncomfortable, you may want to choose not to allow it.

6. Study environment

The best studying is accomplished in a comfortable place, free of external distractions. It is best to set up a regular study schedule, preferably at the same time each day for a specific period of time. Studying with another student who is doing well in the class is recommended. Study for short periods of time with frequent rest breaks. Short, frequent study periods are preferable to marathon sessions. Last-minute studying is not recommended!

### B. Test taking skills

Adults, just like children, are subject to test anxiety. Ensuring the best possible test scores is the responsibility of both the students and the instructor. The instructor should not make tests a "taboo" subject. Inform students how they will be evaluated, when evaluation will occur, and what content the evaluation will cover. The subject matter on a test should not be a secret. If an instructor has not addressed evaluation, students should raise the question. The second part of the equation is that students are responsible for their knowledge of the subject matter. Memorization techniques (mnemonics, mental imagery, self-recitation, relating, etc.), simulated practice, and study groups are all techniques that can improve evaluation scores.

Other test preparation hints are as follows:

- Get a full night's sleep before the exam. Your body needs to be rested for your brain to function at peak capacity.
- Exercise moderately prior to the test. The activity will increase your cardiovascular status, thus increasing the blood supply to your brain.
- Eat a healthy meal. Do not eat a heavy meal within one hour of the exam.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | **V. Summary** |
| | **References** |

177

*ADDITIONAL INFORMATION*

- Allow ample time to travel to the testing location. When you have arrived, take a moment to collect yourself by taking several slow, deep breaths through your nose and slowly let them out. Try to relax all of your muscles.

- Keep a positive mental attitude toward yourself. Close your eyes and say to yourself, "I know the material. I will do well on the test." Never say to yourself. "I don't know the answer." Your brain's capacity to search and retrieve information can be clocked by negative thoughts.

## V. Summary

Learning is a lasting change in behavior. Different learning theories propose different explanations for how and why learning occurs. Instructors need to be aware of the various characteristics and learning styles of adult learners in order to design effective instruction. It is also incumbent upon instructors to provide their students with tips on learning tools that help facilitate their study and test-taking skills.

## References

Berliner, D.C., & Gage, H.G. (1991). Educational Psychology (5th ed.). Boston: Houghton Mifflin Co.

Dubs, S. Gail, (1993). Emergency Medical Services Study Guide. Harrisburg, PA: Pennsylvania Department of Health, Division of Emergency Medical Services.

EMT-Basic: National Standard Curriculum, 1994.

Garmston, Robert J., and Wellman, Bruce (1992). How to Make Presentations that Teach and Transform. Alexandria, Virginia: Association of Supervision and Curriculum Development.

Head, Janet, (1990). The Instructor Resource Manual. R.J Brady & Co.

Heinich, R., Molendo, M., Russell, J.D. (1993). Instructional Media and the New Technologies of Instruction. New York: Macmillan Publishing.

# DEFINITION OF LEARNING

Learning is an enduring change in behavior, or the capacity to behave in a particular way, which is achieved internally through practice and experience, occurs throughout life, and is evidenced by observable external, measurable means.

# BEHAVIORISM

**Behaviorism states that learning has occurred when there are changes in the form or frequency of an observable behavior.**

# COGNITIVISM

**Cognitivism focuses on learning as complex, cognitive processes such as thinking, problem solving, language, concept formation, and information processing.**

# CONSTRUCTIVISM

Constructivism emphasizes that learning is a function of how an individual creates meaning from his/her own experiences.

# CHARACTERISTICS OF THE ADULT LEARNER

- Self-directing
- Experienced
- Motivated
- Problem-centered

# INTRINSIC DIFFERENCES

- **Previous learning experiences**
- **Previous subject-matter experience**
- **Abilities**
- **Motivation**

# LEARNING STYLES

- Professors
- Friends
- Scientists
- Inventors

# LEARNING METHODS

- **Auditory (Hear)**
- **Visual (See)**
- **Kinesthetic (Do)**

# TEST PREPARATION HINTS

- Get a full night's sleep before the exam
- Exercise moderately
- Eat a healthy meal
- Allow ample time to travel
- Keep a positive mental attitude

# CREATING AN EFFECTIVE LEARNING ENVIRONMENT

## 5

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Assess Your Audience ◄
Assess the Physical Environment ◄
Room Setup ◄
Classroom Management ◄

# CREATING AN EFFECTIVE EDUCATIONAL ENVIRONMENT

## *OVERVIEW*

**Suggested instructional time for this lesson:** 1 hour

### Introduction

This lesson explains the purpose of gathering information about students and offers suggestions about the type of information that, once acquired, can contribute to the success of a course. Guidance is given about how to adjust instruction to meet the needs of each unique group of students. The importance of the learning environment, its characteristics, and how to create an atmosphere that supports a rewarding educational experience are discussed.

### Lesson Objectives

Through group discussion and question and answer sessions, the EMS instructor trainee will be able to:

- Describe three information-gathering techniques used to assess an audience
- Specify three individual or group attributes that affect learning
- Describe an adaptive strategy for dealing effectively with three individual or group attributes
- Identify two potential obstacles to learning
- Cite methods to overcome two potential obstacles to learning
- List five characteristics of an ideal learning environment
- Describe seating arrangements that promote interaction
- Name three factors that contribute to a stimulating atmosphere

### Materials Needed

- Overhead projector and screen
- Flipchart and markers

### Instructional Strategies

- Lecture
- Discussion
- Question and answer
- Visual aids
- Activity

193 BEST COPY AVAILABLE

**Go over the objectives** using a flipchart prepared before class.

**Display** OH #5-1

**Write** on flipchart

Ask the following questions, and list student responses on a flipchart labelled Audience Information.

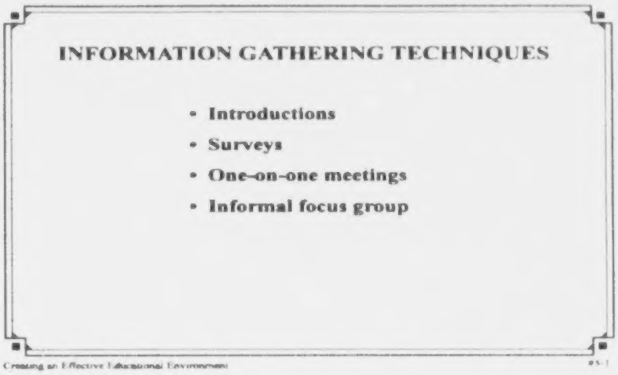
What can you find out about your students during introductions?

How might you adapt a lesson plan based on that information?

## Lesson Objectives

### I. Assess Your Audience

A. Information-gathering techniques



INFORMATION GATHERING TECHNIQUES

- **Introductions**
- **Surveys**
- **One-on-one meetings**
- **Informal focus group**

Creating an Effective Educational Environment #5-1

1. Using introductions effectively

## *ADDITIONAL INFORMATION*

## I. Assess your audience

For many reasons, it is necessary to know "who is in the room." Audience characteristics are a principal concern in the design, development, delivery, and evaluation of any educational experience. As courses are conceived, the audience is postulated in a general sense and the material is planned accordingly. During the first session of class, the premise gives way to reality, and the adept instructor will adjust his/her strategies and methods as the situation demands.

### A. Information-gathering techniques

1. Using introductions effectively

Think back to the first lesson of this Instructor Training Program. Remember the introductions? Valuable information can be shared during those first few minutes of class. Handled effectively, an easygoing question and answer session can help you to find out the particulars of an audience quickly, while at the same time you demonstrate interest in your students as individuals—an essential step in establishing rapport. The information you gather can be used to adjust the instruction, thus enabling you to better meet the needs at hand.

Here are some questions to ask:

- Have you ever taught before? What courses?
- How long have you been involved in delivering emergency medical services?
- What is your specialty? Are you full-time EMS or a part-time volunteer?
- Is this a required course or an elective?
- Are there any particular skills you hope to improve?
- Are you excited about being here?
- Why? What do you hope to gain by attending this training?

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| | 2. Icebreakers |
| **Refer** to handout | 3. Surveys |
| Have students turn to the blank survey in Appendix B, reference 5-1, as an example. | |
| | 4. One-on-one meetings |
| | 5. Focus groups |

## *ADDITIONAL INFORMATION*

2. Icebreakers

   - Hand out a sheet of paper with 20 "one-liners" on it describing hobbies, activities, places visited, and other experiences. Have students go around and get signatures of people who have had the experience.

   - Distribute matching "items" and have students find their match, e.g., puzzle pieces, numbers, etc. One variation is to have everyone put one shoe in a large bag and then take someone else's shoe out. When they meet their match, they ask questions and then introduce the person to the rest of the class.

3. Surveys

   One way to get honest information from your participants is to conduct an anonymous survey. If you have the opportunity, try and get the answers to some pertinent questions ahead of time. This will allow you to prepare for any special needs in advance. If you cannot survey for the information ahead of time, make the survey one of the first exercises in the course; then adjust as necessary.

4. One-on-one meetings

   Sometimes a student will approach you one-on-one about a question or concern s/he was reluctant to bring up in class. For example, if a student needs special arrangements for a makeup exam, s/he will often use "office hours" to make the request. Sometimes students will simply catch you in the hallway. Determine before the course starts if and when you will be available outside of class and communicate this to the students on the first day. Use these one-on-one meetings to get to know your students and to obtain feedback about the class.

5. Focus groups

   A focus group is just that, a group with a focus. Focus groups can be information-gathering or problem-solving. A survey can be used prior to the meeting; discussion can then center around the survey results. The instructor of a new curriculum might conduct an informal focus group during the first session of class with the goal of customizing the presentation before the next session.

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*INSTRUCTOR NOTES*

**Display** OH #5-2

Please note that this material reinforces much of what was modelled in Lessons 1 & 2. If you feel your students are ready, proceed to the next section and just let them know the material is here for their reference.

**Ask** a question

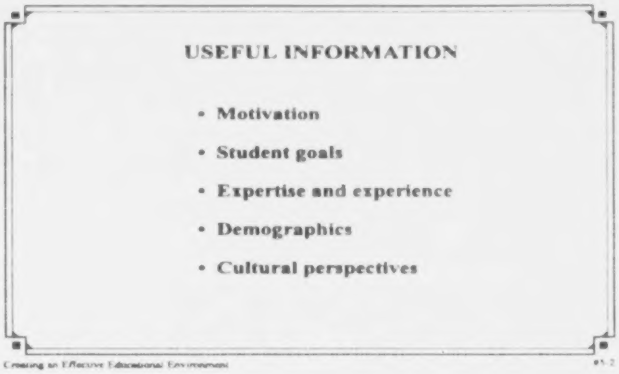
What might motivate a student to attend a class?

Some possibilities:

- Certification
- Letter of recommendation
- Specific skill acquisition
- Information about specific topics

*LESSON PLAN*

B. Useful information and adaptive strategies



USEFUL INFORMATION

- Motivation
- Student goals
- Expertise and experience
- Demographics
- Cultural perspectives

Creating an Effective Educational Environment

#5-2

1. Understanding motivation
2. Balancing student goals with course objectives

*ADDITIONAL INFORMATION*

## B. Useful information and adaptive strategies

1. Understanding motivation

As discussed in Lesson 1, the Introduction, student motivation is an important component of successful training. You were urged to find out whether the training is mandatory or voluntary and if students are excited to be in class. If you have a highly motivated group, you may go through the course faster than anticipated. If this occurs, restructure lessons and increase the depth planned for the most relevant topics, and/or include more exercises, activities, and practice. Some learners have a voracious appetite for knowledge and skills and an adaptive strategy will help you to challenge them.

If a group is unmotivated, find out why. Address the issues whenever possible. Enlist the students' support in making the course more fun and interesting. Control is important to adult learners. If you can persuade them that they influence what occurs, they may work with you instead of against you to create a more productive learning experience.

There are often incentives that motivate students to attend training and it is good to know what they are. Perhaps the course is necessary for professional advancement. You may have students who attend because the class counts for continuing education credits and they are obligated to complete a certain number of hours. Students may attend because they are simply interested in the subject matter. As you seek to involve and interest your students, it helps to understand what is motivating each of them.

2. Balancing student goals with course objectives

Differences may exist not only in basic enthusiasm, but in students' focus, interest, and how much value they perceive in various topics. Many times adult learners have years of experience and want in-depth knowledge on the subjects that interest them. They may want to concentrate on a particular skill or an area that directly relates to their job requirements. As the instructor, you have to measure individual interests against the lesson plan, try to meet the needs of your students, and still present the entire curriculum.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | 3. The significance of expertise<br>4. Using demographic information |

205

*ADDITIONAL INFORMATION*

For example, in the Instructor Training Program, literally hours could be spent on the learning theory that underlies "practical" teaching methodologies. Typically, the adult learner is interested in real-life application, and so the focus of this course is on skill development. However, there may be those in the room who are fascinated by the theoretical underpinnings of education. These individuals see theory as the substance behind the application; others want to "stop talking about it and just do it!" Instructors need to be able to balance the objectives of the course with divergent participant interests. When in doubt, look to the course and lesson objectives for guidance.

3. The significance of expertise

Additionally, the depth and breadth of experience represented by each student in each classroom is significant. Levels and types of experience vary from course to course and, as an instructor, you must be ready, willing, and able to adjust accordingly. How much experience have they had? Is there a wide range in the degree and variety of expertise represented, or is the group fairly homogeneous?

Most groups are not homogeneous. Therefore, in a typical classroom, you will have to "teach to the middle." Some tips on remediation and enhancements that target the students at either end of the spectrum are included in Lesson 7, Evaluation and Lesson 8, Instructional Strategies and Methods. It is important to evaluate student progress at regular intervals, throughout the course. Frequent assessments allow an instructor to address problem areas before it is too late for adaptive strategies.

4. Using demographic information

Demographic data includes details such as age, educational level, EMS experience, and place of residence for each student. This information will help you tailor your presentation; for example, through the use of age-appropriate anecdotes. Students will appreciate it if you incorporate location-specific practices/regulations or details unique to the branch of EMS service represented. This is because adult learners have a strong desire to learn material that is particularly relevant to them, not just information in general.

Demographic information should, on an individual basis, be anonymous. If you want to report your findings to the group, do so as class averages. The course administrator may want to keep a record of demographic data.

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| | 5. Appreciating cultural issues |
| **Ask** a question<br>Ask what students think might be potential obstacles to learning. | C. Identify and overcome potential obstacles to learning<br>1. Learning disabilities |

*ADDITIONAL INFORMATION*

5. Appreciating cultural issues

Recognize that the ways in which individuals interact in a learning environment can be influenced by unique cultural characteristics. For example, certain cultures place a high value on consensus-building. It may be difficult for an individual who has adopted problem-solving strategies consistent with a consensus-building approach to argue his/her position effectively in a group that sees compromise as backing down, or even losing. As an instructor, you are obliged to evaluate each student on achievement, regardless of personal style. Furthermore, appreciation of diversity issues will help you to create an educational environment that is flexible, creative, and receptive to the needs of all students.

## C. Identify and overcome potential obstacles to learning

1. Learning disabilities

A learning disability typically refers to any condition that interferes with an individual's ability to absorb, process, and apply information. An "attention deficit disorder," for example, is a condition in which concentration is impaired. Dyslexia is a physical condition which presents impediments to processing the written word. Below average reading ability is another obstacle to learning, as is a deficit in study skills. Obviously, these must be dealt with effectively for the student to derive maximum benefit from a course of study.

Learning disabilities should be handled on an individual and confidential basis. You should encourage all students who have special needs to speak with you privately. If you suspect a problem, approach the student yourself. Although these conditions are being identified more reliably, many adults may have never recognized their "symptoms" as something which, with appropriate interventions, can be overcome. Explore solutions with the student to make his/her training an effective and rewarding learning experience.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | 2. Physical limitations<br>3. State and institutional policies<br>4. Local resources |

*ADDITIONAL INFORMATION*

2. Physical limitations

Physical limitations are as important to identify as learning disabilities because they too can affect learning. Adjustments to your instructional presentation may be required for hearing- or visually-impaired students and wheelchair-bound participants.

For example, a hearing-impaired student may require an interpreter. However, a seat at the front of the class to facilitate lip-reading might be sufficient or even preferable. When options are available, select an intervention that the student feels comfortable with, and if lip-reading is the preferred solution, remember to maintain an unobstructed view for the student as you lecture.

A visually-impaired student may require a front row seat as well, so that instructional aids such as graphics and overheads can be seen clearly. As per the design principles discussed in Lesson 9, Media, make sure that your visual aids are legible. It may also be helpful to provide printed copies of your overhead transparencies.

3. State and institutional policies

Contact your state EMS office to determine what, if any, accommodations are required and/or appropriate. Disability requirements will differ for educational institutions; check with site administrators for their guidelines. Appendix B includes the accommodation policy adopted by the National Registry.

4. Local resources

Familiarize yourself with locally available resources, because there may be times when you will need to refer a student to other sources of assistance.

You are not expected to be all things to all people. If a student is experiencing serious personal problems that interfere with successful course completion, it is probably in his/her best interest to address those problems with a trained professional or personal friend rather than with you. That frees you up to make reasonable adjustments to help them complete course requirements; this is your responsibility as their instructor and should be the focus of your support strategy.

*INSTRUCTOR NOTES*

**Ask** a question

Can you think of other adjustment strategies that we haven't mentioned, particularly related to EMS?

*LESSON PLAN*

D. Your "Game Plan"—a review of adjustment strategies

- Restructure lessons by increasing the depth of the most relevant topics
- Add exercises, activities, and practice
- Enlist the support and commitment of students to help create a learning experience that meets their needs
- Give examples of how their participation and feedback can help you to make the material more relevant and useful to them
- Meet individual needs, if possible; e.g. letter of recommendation, certification, critical skill development
- Teach to the middle, but employ remediation and enhancement strategies
- Be aware; appreciate cultural differences
- Use informal evaluation tools to measure comprehension, competence
- Assess frequently, before beginning new material

*ADDITIONAL INFORMATION*

### D. Your "Game Plan"—a review of adjustment strategies

Now that you've gathered all this data, how do you move forward with an instructional "game plan" that will be effective? Teaching is a lot like coaching a ball team. If you're out there on the field, and the defense seems impenetrable, you may have to beef up your offensive strategy. On the other hand, if your team is flying high, with victory in the air, how do you keep them focused enough to win once more? Adjustment strategies should be considered and incorporated on a case-by-case basis, depending on the needs of the students.

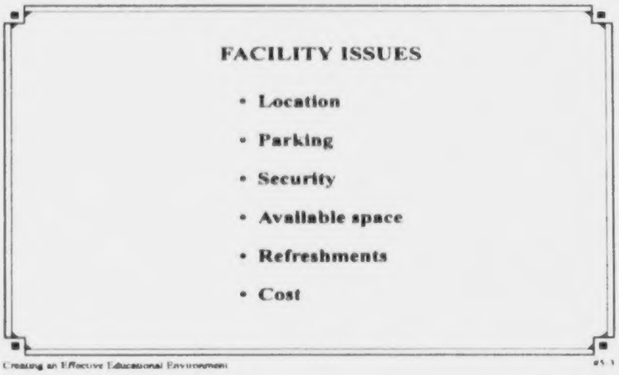
| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|

## II. Assess the Physical Environment

A. Features to consider

1. Facility issues

**Display** OH #5-3



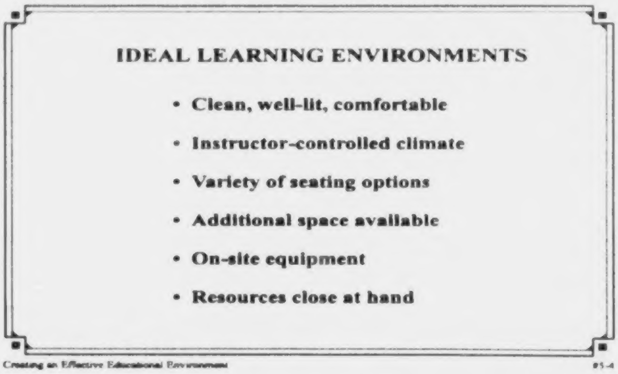
**FACILITY ISSUES**

- **Location**
- **Parking**
- **Security**
- **Available space**
- **Refreshments**
- **Cost**

Creating an Effective Educational Environment #5-3

2. Classroom characteristics

**Display** OH #5-4



**IDEAL LEARNING ENVIRONMENTS**

- **Clean, well-lit, comfortable**
- **Instructor-controlled climate**
- **Variety of seating options**
- **Additional space available**
- **On-site equipment**
- **Resources close at hand**

Creating an Effective Educational Environment #5-4

## II. Assess the Physical Environment

During training, it is important that students feel comfortable and are free of distractions. It may be your responsibility as an instructor to research available facilities and select the appropriate one for your course needs. Listed below are some characteristics of an ideal learning environment. Take these into consideration when you are securing a facility.

### A. Features to consider

1. Facility issues

- Location
- Parking
- Security
- Available space
- Restrooms
- Refreshments
- Cost

Determine what each facility provides for the convenience and comfort of students and instructors. Be aware that the class schedule impacts criteria importance, e.g., outdoor lighting and security may be essential for student safety during night classes, while day classes require readily available food service. You might also consider that parking needs are affected by class size, and that your student population will probably be happiest with a local facility or a trip to a coveted location.

2. Classroom characteristics

Creating an effective learning environment requires attention to those aspects of the training site that affect how comfortable students are in the classroom. When students are at ease they are better able to concentrate and learning is facilitated.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | 3. Course-specific criteria<br>a. Break-out rooms<br>b. Special requirements |

*ADDITIONAL INFORMATION*

Consider some of the characteristics of an ideal learning environment:

- Clean
- Well lit
- Climate control; i.e., the ability to adjust temperature
- Classroom size is appropriate for the number of students and course requirements
- Seating can be arranged to suit the needs of each lesson
- Additional space is available to store equipment and supplies, or as an extra room for small group work

In addition to basic environmental conditions, consider the following:

- Equipment availability on site
- Organization and layout, i.e., resources close at hand and easily utilized
- Potential distractions, e.g., cheerleading camp directly outside the window

3. Course-specific criteria

a. Break-out rooms

When a course includes large numbers of students and the lesson plan calls for a highly interactive instructional strategy, it is often beneficial to have designated space available for small group work. Sometimes called breakout rooms, these areas provide privacy during group interaction. This is particularly useful if the group will be presenting to the entire class later on and an element of surprise is desirable, or if the class size makes it difficult to concentrate in one large room.

b. Special requirements; e.g. practical skills courses, such as ambulance instruction

Be aware of any special equipment or site requirements. For example, if you are teaching the Emergency Vehicle Operators Course (EVOC), you will need outdoor space adequate for ambulance instruction in addition to classroom space.

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| | B. Facility arrangements<br>1. Find the right training facility<br>2. Visit the site<br>3. Check out supplies and equipment |

*ADDITIONAL INFORMATION*

## B. Facility arrangements

1. Find the right training facility

   As the instructor, it may be your responsibility to research available facilities and select the appropriate one for your course needs. Use the criteria listed above to assess the advantages and disadvantages of each site. Determine essential vs. non-essential elements and eliminate potential sites that lack key criteria. Then, weigh the advantages of each to decide upon the right training facility for your particular course.

2. Visit the site

   Once you have a training site secured, visit the room. Based on the room and your instructional strategies, develop a plan on how to best utilize the space. Determine workable seating options that allow space for all of the instructional methods you will employ, such as lecture, small groups, and practical exercises.

3. Check out supplies and equipment

   Note the equipment requirements for each lesson and confirm what the site has available and what must be planned for and provided by the instructional staff or course administrator. Arrange for the equipment well in advance of the training. Identify in advance who is responsible for helping you to set up equipment or replace faulty equipment. Have a supply of extra parts that may need to be replaced; e.g., light bulbs for the overhead projector.

   Prepare overhead transparencies and handouts as you complete your lesson plan. Proofread carefully; participants will notice errors and be distracted by them. Make sure that you have all supporting materials duplicated as far in advance as possible, to allow time for unexpected delays or last-minute corrections. For more information about media and equipment management, see Lesson 9, Design and Use of Media.

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| | 4. Plan for known distractions<br>5. Scheduling |

4. Plan for known distractions

Distractions come in all shapes and sizes, and are created by people, places, and things. The concentration of students can be affected by poor lighting, a lawn mower outside, a disruptive student, uncomfortable temperatures, rattling air conditioning units, loud fans, street noise, etc.

Deal with known distractions before class begins. For example, if the lights flicker, make sure the facility takes care of the problem right away. While it is impossible to identify all potential distractions, a quick site survey may prevent a difficult situation when class begins.

If a disturbance occurs during class, assess its significance. Though minor distractions should be ignored, if something interferes with student concentration, the training suffers. In those cases, consider options to resolve the situation, either by yourself or as a class. When the class participates in the solution, they are likely to be satisfied with the outcome. Don't let unforeseen events determine learning outcomes. Keep the course goals and lesson objectives in mind and find creative ways make the instruction accomplish those objectives regardless of disruptions.

5. Scheduling

As you develop your agenda for the training session, plan for regular breaks. Adults need frequent breaks to take care of physical needs (restrooms, coffee, soft drinks, smoking, stretching), to stay alert mentally, and to take care of other responsibilities. Scheduling breaks every 50 minutes is ideal, and sessions should never go longer than 75 minutes without a break. Scheduling breaks and listing them in your agenda gives students a sense of structure and control. Of course, once a break is listed in the course schedule, participants will hold you to it. If necessary, bring them into the decision-making process and reach consensus on a change in schedule.

*INSTRUCTOR NOTES*

**Ask** a question

What are some factors to consider when you set up your classroom?

**Write** on flipchart

List responses on a flipchart labelled Factors in Room Setup.

*LESSON PLAN*

## III. Room Setup

A. Factors to consider

1. Lesson objectives and types of activities
2. Space available
3. Group size

## III. Room Setup

Adults tend to have more physical discomfort in the classroom; for example, difficulty seeing and hearing or discomfort sitting in one place for a long time. It may have been a long time since adult students completed their formal education and some may find it hard to adjust to the constraints of the classroom.

Room setup is just as important as other aspects of lesson preparation. Trainees will take their cue from the setting they encounter and their motivation to learn will be affected accordingly. Orderly and careful preparation will maximize comfort and minimize distractions.

### A. Factors to consider

Consider the following factors as you determine the best seating configuration for the classroom:

1. Lesson objectives and types of activities

Ask yourself what is required and what seating arrangements will best facilitate goal accomplishment. Must students perform actions and/or demonstrate understanding; i.e. performance- or knowledge-based objectives? What are the space requirements for a given practical exam or activity? Will students need a lot of group interaction, or is there a great deal of individual analysis that is best done without distractions? If the circumstances change from lesson to lesson, can you alter the seating easily?

2. Space available

Ideally, the instructor would decide what the best classroom set up is for each lesson based on the answers to the preceding questions, and that would determine the classroom obtained. However, instructors will most often have to choose among available rooms. Reality demands adaptation as well.

3. Group size

Some room setups accommodate large groups more easily. The number of students will also impact the number of small groups or pairs, if needed. If group work is part of your instructional strategy, plan accordingly.

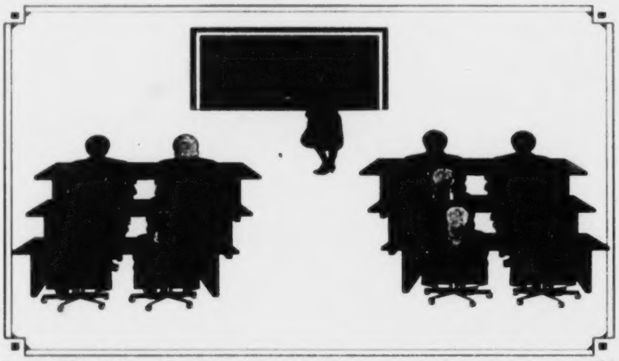
4. Media

5. Need for instructor control vs. participant interaction

B. Seating options

**Display** OH #5-5

1. Classroom



Creating an Effective Educational Environment #5-5

4. Media

Seating must allow every student an unobstructed view of any visual aids used during instruction.

5. Need for instructor control vs. participant interaction

Certain configurations encourage interaction more than others. If maintaining attention becomes an issue, adjust accordingly.

**B. Seating options**

1. Classroom

Advantages

- Maximizes instructor control
- Fair instructor mobility (with aisles at center and sides)
- Good ability to see visual aids in the front of the room
- Maximizes space

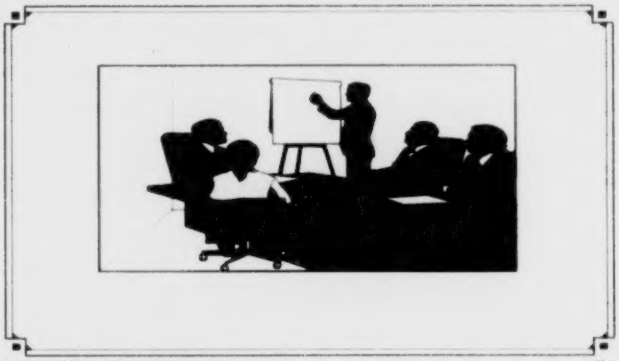
Disadvantages

- May lose people in the back of the room
- Discourages participation
- Reduces interaction among participants

*INSTRUCTOR NOTES* | *LESSON PLAN*

**Display** OH #5-6

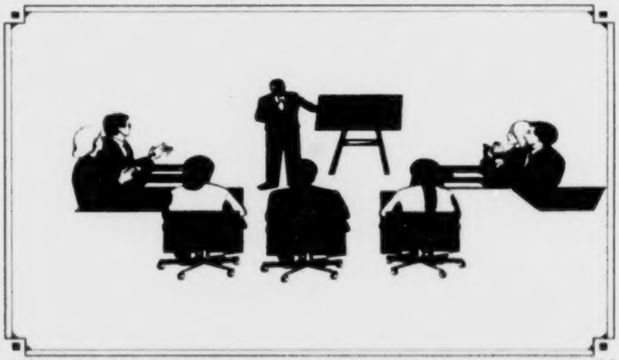
2. Boardroom



Creating an Effective Educational Environment #5-6

**Display** OH #5-7

3. Semi-circle, U-shape



Creating an Effective Educational Environment #5-7

## *ADDITIONAL INFORMATION*

2. Boardroom

This arrangement works well for small groups of experienced trainees who know one another.

Advantages

- Encourages interaction among participants
- Encourages participation
- Maximizes writing space for participants
- Excellent for team work in small or break-out groups

Disadvantages

- Poor instructor mobility
- Some participants may have difficulty seeing visuals
- Some participants may have difficulty seeing instructor
- Uses more space per person
- Not suitable for large groups

3. Semi-Circle, U-Shape

Good for hands-on work where the instructor will check on progress.

Advantages

- Excellent instructor mobility
- Encourages interaction among participants
- Encourages participation

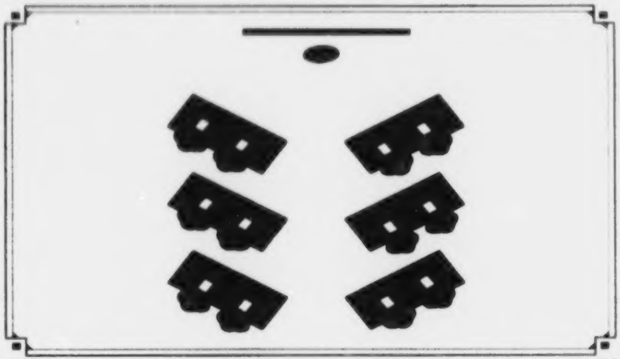
Disadvantages

- People near the front may have to turn to see visuals
- Uses more space per person
- May not work for large groups

*INSTRUCTOR NOTES* | *LESSON PLAN*

**Display** OH #5-8

4. Chevron



Creating an Effective Educational Environment #5-8

**Conduct** activity

Six cards have been provided in Appendix A, each with two different situations. These should be reproduced and cut out prior to class. Use blank cards if you prefer other examples.

C. Activity 5.1—Room Setup
   1. Form small groups
   2. Given group characteristics and typical learning events, come to consensus on the ideal seating arrangement(s)
   3. Present your conclusions to the class

D. Logistics involved in room setup
   1. Team teaching
   2. Time

4. Chevron

Advantages

- Excellent instructor mobility
- Excellent interaction among dyads or quads
- Encourages participation
- Provides writing space for participants
- Good ability to see visual aids
- Works well even with large groups

Disadvantages

- Poor for whole-group interaction

**C. Activity 5.1—Room Setup**

Divide the class into small groups. Six scenario cards have been provided for this activity, each with two scenarios depicting different learning objectives, types of activities, and class size. Refer to Appendix A, Activity 5.1.

Students should discuss optional seating arrangements, list the advantages and disadvantages of each one, and come to consensus on the arrangement best suited to the characteristics of each example. Each group should share their results with the entire class.

**D. Logistics involved in room setup**

1. Team teaching

In some team teaching situations, instructors split lessons between them. This requires communication. Instructors should talk to one another about the requirements of each lesson and plan ahead for changes in the room setup.

2. Time

Be sure to allow time in the course schedule for the logistics of rearranging the classroom. You can ask the students to help you, but this is inherently disruptive and you will lose some time. It is also a good idea to explain to students why any changes are being made.

## IV. Classroom Management

A. Preparation

  1. Checklist(s)

  2. Helpful hints

B. Establish ground rules

*ADDITIONAL INFORMATION*

## IV. Classroom Management

### A. Preparation

1. Checklist(s)

Checklists are valuable organizational tools. Encourage students to prepare one prior to teaching a course and before each lesson. Depending upon the course materials, equipment/supply requirements may be indicated in an overview section at the beginning of the lesson. This list should be added to with more specific notes as necessary. Refer students to the sample pre-class checklist that has been included in Appendix B.

2. Helpful hints

- Flipcharts that can be done ahead of time will save you time in the classroom. Roll the prepared sheets and secure them with a rubber band until you get to the training room.

- Match each overhead to the lesson plan outline.

  Make sure that you have a transparency in good condition for each one noted in the lesson plan. Clear plastic covers, three-hole punched, are a great way to organize overheads and protect them. Simply arrange them sequentially by lesson in an open binder on the lectern.

- Arrive early

  Get to the training room at least 45 minutes before your session begins. This gives you time to skim through your lesson plans, run through your pre-class checklist, and solve any problems you find. Additionally, you will be able to greet the participants individually as they come in, which will help them (and you) to feel more comfortable.

### B. Establish ground rules

Ground rules specify the norms (or "shoulds") for a session. An instructor may describe the ground rules for a session and post them, asking for any additions that the group believes would enhance performance.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | C. Encourage an interactive, participatory learning environment<br>1. Set the tone<br>2. Practice active listening |

On the other hand, the instructor may begin with a blank slate and solicit group input on ground rules that would make the group work at its best. Either way, ground rules provide trainees with a structure from which to develop expectations. Ground rules make acceptable behavior clear up front and even help to generate desired behavior. These rules are a valuable tool to use when addressing inappropriate behavior.

### C. Encourage an interactive, participatory learning environment

The ideal adult learning environment also includes less tangible elements. Because adults have often had many valuable experiences that are relevant to the course material, they will achieve the most when they have opportunities to direct their own learning. As we've said, adult instruction must be participatory to be effective. At the same time, instruction needs to be structured in order to achieve its objectives.

1. Set the tone

Adults are self-motivated unless the environment threatens their self-esteem. Many adults are uncomfortable with the possibility of venturing a "wrong" answer or a "stupid" question, and may even be uncomfortable with being in a teacher/student hierarchy. In teaching adults, it is essential to set the tone of a session immediately. Participants will be absorbing your verbal and non-verbal cues to assess your perceptions of them and the risks of participating. Make it clear that you think of yourself as someone who is facilitating learning among adults who already have a broad range of skills and experience.

2. Practice active listening

Active listening is an important part of creating an interactive environment. It involves carefully listening to what a participant is trying to communicate and then reflecting back your understanding of what was said. Avoid simply parroting back answers that trainees give. Instead, reflect, identify the most important message, and summarize. In content areas, you can use active listening to clarify. An example of an "active listening" response to a content statement may be, "Jennifer, it sounds to me like you feel you understand the *[insert your own EMS process example]* process as a whole, but are having trouble linking *[x to y]*. What do you think?"

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| | 3. Pay attention to signals from students<br>a. Regarding physical needs<br>b. Regarding distractions<br>c. Involve participants in resolution process |

*ADDITIONAL INFORMATION*

Active listening is invaluable when dealing with emotional issues or with participants who are responding emotionally. After reflection, a simple statement such as "John, it seems to me that safety concerns are behind your objections to the new procedures" lets the student know that you take his or her concern seriously and are attempting to work with them. Do not be concerned about being wrong. Participants will quickly correct you if you are. If you have listened carefully and tried to understand, students will appreciate it. In fact, having someone listen carefully to their concerns is often sufficient to smooth out a difficult situation. Active listening requires work, but the dividends can be exciting.

3. Pay attention to signals from students

a. Regarding physical needs

Participants will give you cues about their physical needs. If they need a break, they may withdraw, begin holding side conversations, or even engage in challenging behavior. The most obvious sign that it is time for a break is participants leaving their seats.

b. Regarding distractions

If participants are distracted by noise or sounds, they will generally concentrate their attention on the source, withdraw, or hold side conversations. If participants are too hot or too cold, they will adjust the temperature themselves by removing or adding jackets, opening collars, fanning themselves, or huddling.

c. Involve participants in resolution process

Check out unclear cues of participants by using active listening techniques. Describe what you have noticed and suggest an interpretation. "I noticed some of you putting your jackets back on. Is it too cold in here?" If practical, give participants a choice when addressing a problem, particularly if they have strong feelings. "It seems like the group is ready for a break, but we have one short section left for this morning. Would you prefer to push on now and go to lunch when we're done, or take a ten-minute break now and come back to finish this section before lunch?" The group will be more likely to cooperate if they feel like they have some control.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | **V. Summary**<br>**References** |

*ADDITIONAL INFORMATION*

## V. Summary

This lesson has presented the importance of knowing your audience before you begin to instruct. Audience information allows you to tailor your presentation to meet the needs of your students, thereby making your presentation more effective. The lesson also discussed the importance of the learning environment, and suggested a variety of seating configurations depending upon the instructional objectives. Classroom management skills such as pre-class preparation and establishing ground rules were introduced. Finally, the principles of active listening, facilitation, and other facets of creating an interactive, participatory learning environment were discussed.

## References

Berliner, D.C., & Gage, H.G. (1991). Educational Psychology (5th ed.). Boston: Houghton Mifflin Co.

Heinich, R., Molendo, M., Russell, J.D. (1993). Instructional Media and the New Technologies of Instruction. New York: Macmillan Publishing.

# INFORMATION GATHERING TECHNIQUES

- Introductions
- Surveys
- One-on-one meetings
- Informal focus group

# USEFUL INFORMATION

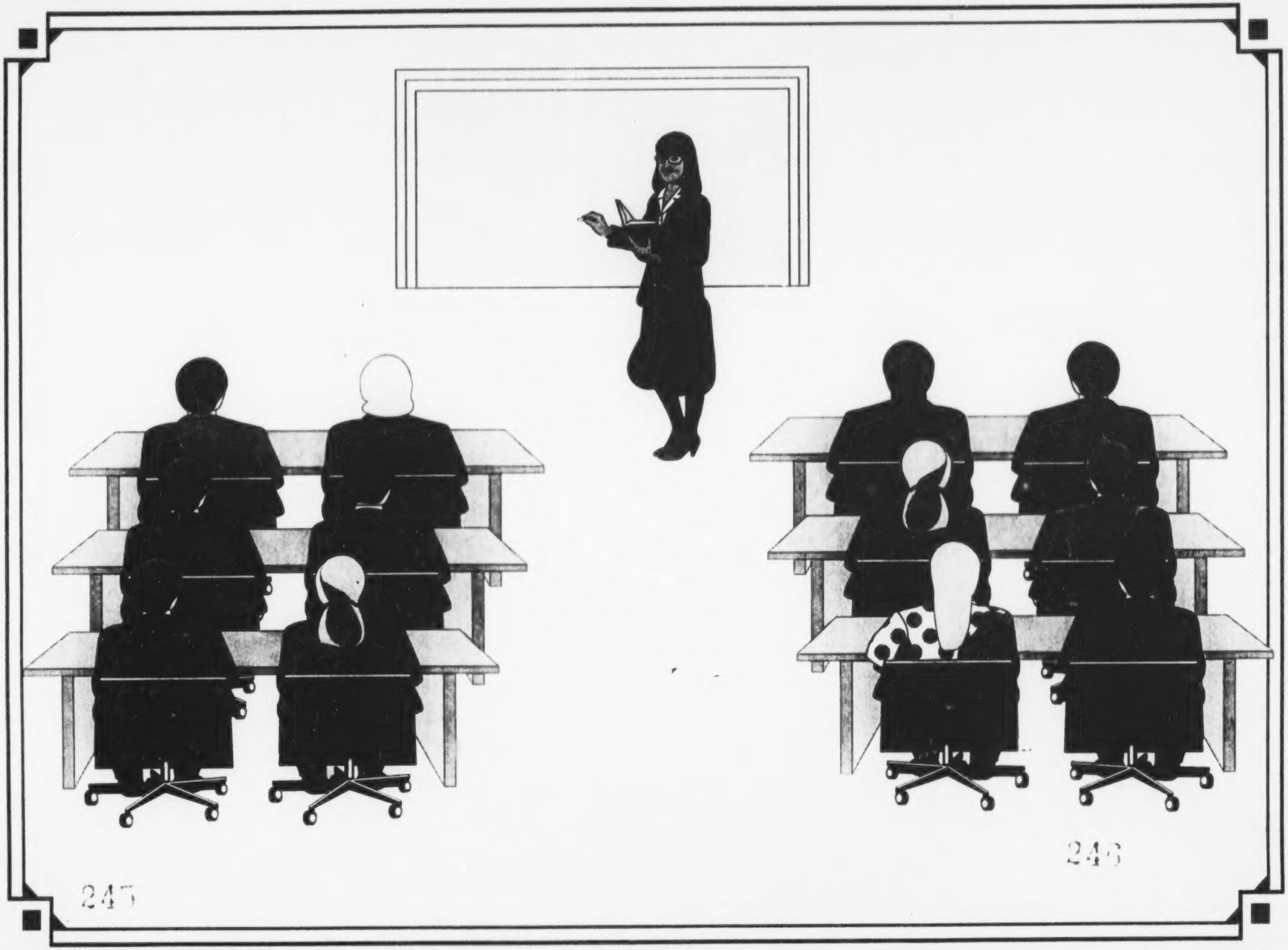
- **Motivation**
- **Student goals**
- **Expertise and experience**
- **Demographics**
- **Cultural perspectives**

# FACILITY ISSUES

- Location
- Parking
- Security
- Available space
- Refreshments
- Cost

# IDEAL LEARNING ENVIRONMENTS

- Clean, well-lit, comfortable
- Instructor-controlled climate
- Variety of seating options
- Additional space available
- On-site equipment
- Resources close at hand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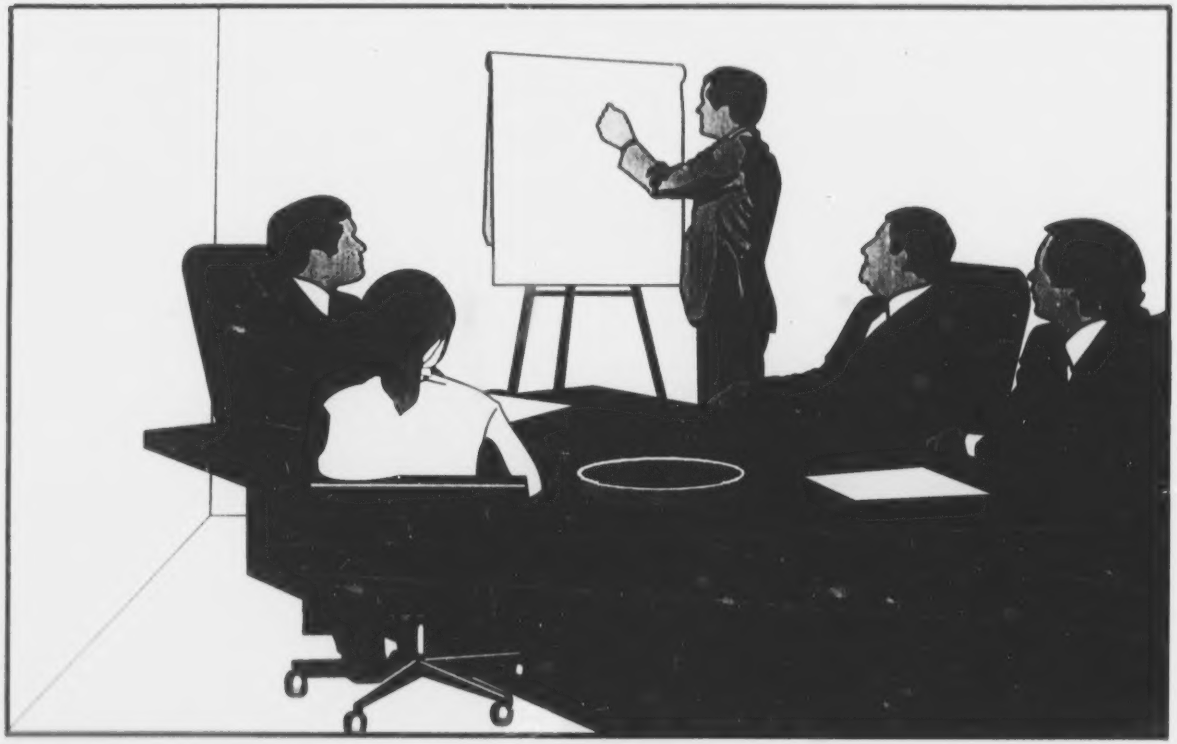
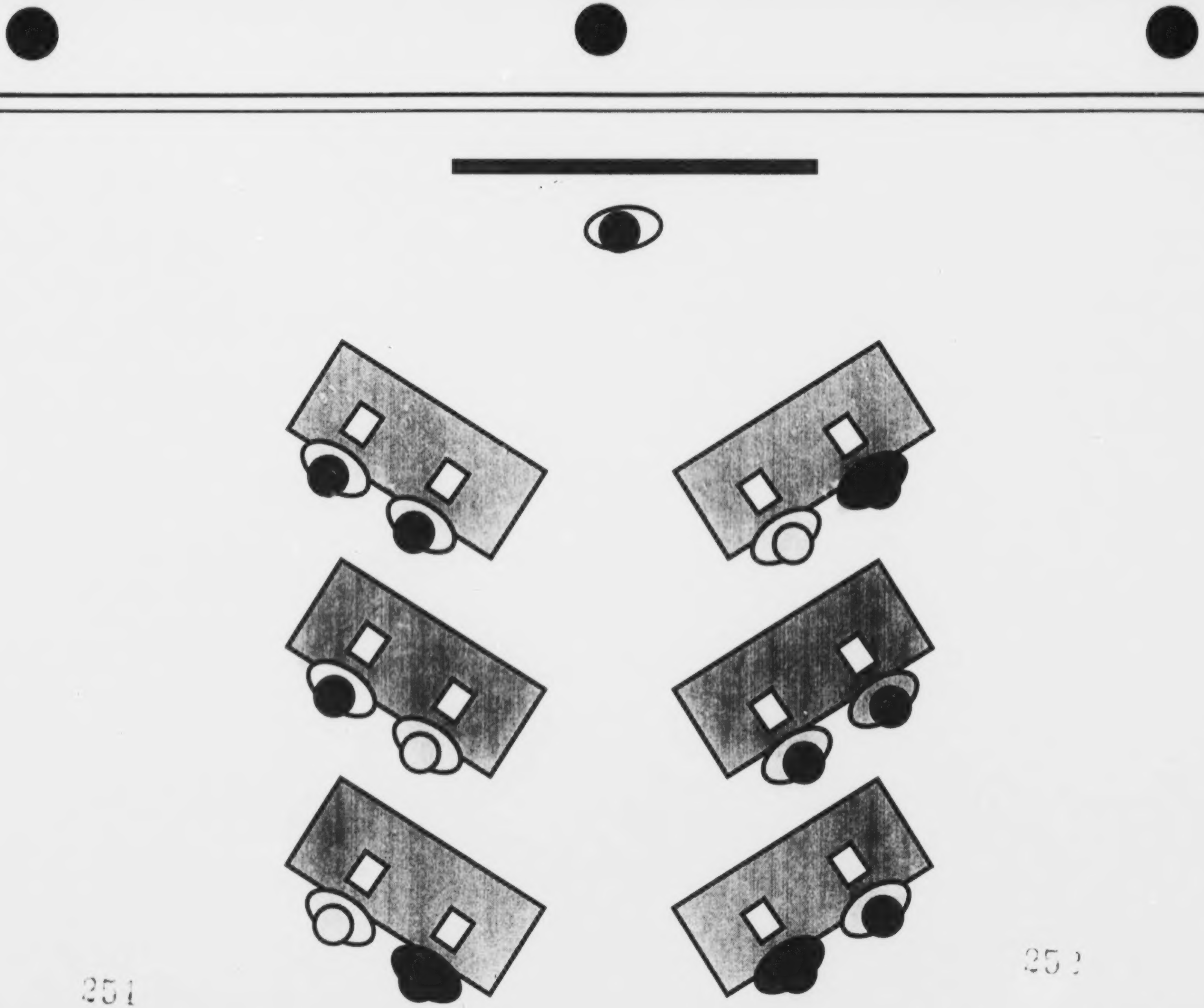




# OBJECTIVES

## 6

Overview of Training Design and Development ◂
Preparing to Teach Existing Curriculum ◂
Learning Objectives ◂
Learning Domains ◂
Getting Started—Determine Your Lesson Objectives ◂

## *OVERVIEW*

**Total time for this lesson:** 2 hours

### Introduction

This lesson is intended to familiarize you with the fundamental steps necessary to develop effective training materials. It also provides specific information on how to develop measurable objectives. Additionally, in this lesson you will complete the first of a series of exercises that will culminate in your final presentation.

### Lesson Objectives

Through group discussion, question and answer sessions, and individual activities, the EMS instructor trainee will be able to:

- List five basic phases of training design and development
- Explain how to apply your knowledge of the training design and development process to existing curriculum
- List the components of a measurable objective
- Explain the purpose of objectives, for participants and instructors
- Identify objectives as either affective, cognitive, or psychomotor

Given a lesson from the EMT-Basic course, the EMS instructor trainee should be able to:

- Evaluate existing lesson objectives and determine which are applicable
- Rewrite applicable objectives according to the A-B-C-D guidelines
- Demonstrate the ability, during your final presentation, to use these objectives as the basis for content presentation and student evaluation

### Materials Needed

- Overhead projector and screen
- Flipchart (prepared objectives)
- Flipchart and markers
- EMT-Basic Lessons, Appendix B

### Instructional Strategies

- Lecture
- Discussion
- Question and answer
- Activities
- Visual aids

# OBJECTIVES

*INSTRUCTOR NOTES*

**Go over the objectives** using a flipchart prepared in advance. Post visibly in the room.

**Ask** a question

Has anyone heard of or used Instructional Systems Design? What has been your experience in designing and developing courses?

**Display** OH #6-1

Tell participants that if they have taught before, they have probably been involved in one or more phases of the ISD process:

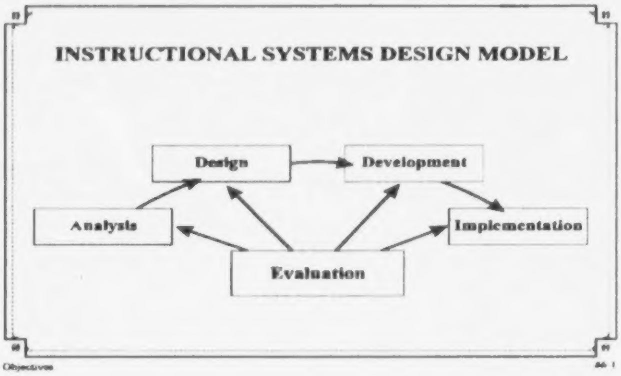
- Analysis
- Design
- Development
- Implementation
- Evaluation

*LESSON PLAN*

## Lesson Objectives

## I. Overview of Training Design and Development

A. Instructional System Design (ISD)


INSTRUCTIONAL SYSTEMS DESIGN MODEL
Design
Development
Analysis
Implementation
Evaluation
Objectives
#6-1

1. Analysis phase

   a. Analysis phase outcomes

      (1) Overall course goals are determined

      (2) Audience is identified

      (3) Training delivery medium/media is selected

*ADDITIONAL INFORMATION*

## I. Overview of Training Design and Development

A systematic approach to the design and development of truly effective training materials has been established for many years. While the process is constantly being refined through research efforts, the basic elements have remained the same.

### A. Instructional System Design (ISD)

Instructional System Design (ISD) is a systematic, logical procedure used to develop curriculum and instruction. The following five phases are essential and will be discussed in detail in this lesson:

- Analysis
- Design
- Development
- Implementation
- Evaluation

1. Analysis phase

The analysis phase is the "fact finding" stage of ISD. This phase is critical because the information you collect and analyze is the foundation on which the remaining phases are built.

a. Analysis phase outcomes

In the analysis phase, the following three steps are accomplished:

(1) Overall course goals are determined

(2) Audience is identified

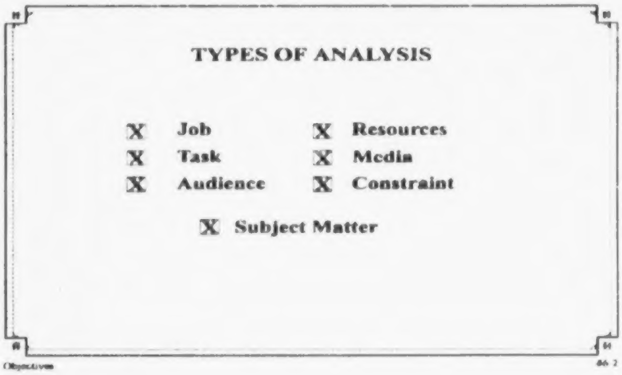
(3) Training delivery medium/media is selected

# OBJECTIVES

*INSTRUCTOR NOTES* | *LESSON PLAN*

**Display** OH #6-2

b. Types of analysis

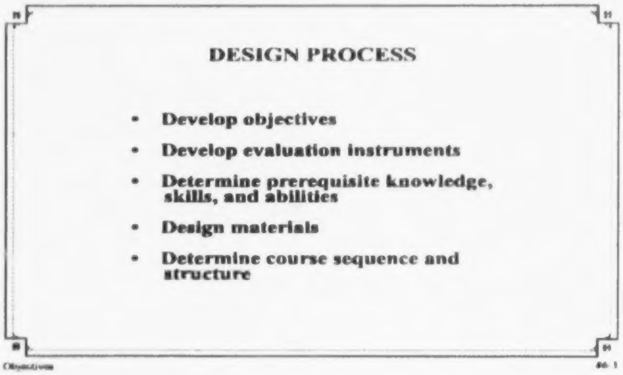


**TYPES OF ANALYSIS**

☒ Job
☒ Task
☒ Audience
☒ Resources
☒ Media
☒ Constraint
☒ Subject Matter

**Display** OH #6-3

2. Design phase



**DESIGN PROCESS**

- Develop objectives
- Develop evaluation instruments
- Determine prerequisite knowledge, skills, and abilities
- Design materials
- Determine course sequence and structure

*ADDITIONAL INFORMATION*

Answers to the following questions are discovered in the analysis phase:

- Is the training needed?
- Exactly what skills and knowledge must be acquired?
- Who needs to be trained?
- What type(s) of training would achieve the desired result?
- What resources are available to develop and deliver training?
- Are there any constraints limiting the process?
- Which type of training delivery method(s) is optimal, given resources and constraints?

b. Types of analysis

- Job analysis—what skill must be learned or improved?
- Task analysis—how can that skill be broken down into specific tasks?
- Audience analysis—what are the significant attributes of the group that will receive the training?
- Resource analysis—what assets can we bring to bear to accomplish our training objectives?
- Constraint analysis—what are the limitations we must operate within?
- Subject matter analysis—what type of information will be conveyed in the training? What is the scope and depth?
- Media analysis—what is the most appropriate medium or media by which the instruction should be delivered?

2. Design phase

Having selected the ideal way to deliver a particular kind of subject matter, whether via an instructor in a classroom or by satellite to remote downlink locations, you are ready to begin the design of your course materials.

## OBJECTIVES

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| | a. Objectives and evaluation instruments |
| Tell students to check with their state certification office regarding prerequisites for specific courses. | b. Prerequisite knowledge, skills, and attitudes |
| | c. Design of course materials |

## *ADDITIONAL INFORMATION*

a. Objectives and evaluation instruments

During the design phase, your course or curriculum starts to take shape. You write measurable objectives that reflect the performance you expect students to achieve, then you decide upon evaluation instruments that will measure student achievement of these objectives.

With well-defined objectives, you can determine exactly how to test achievement. You can write the test questions and design appropriate skill assessments that will measure student competence. And with the objectives and evaluation instruments in place, you can go on to develop the content of your lesson plan, making sure to present all of the information students will need to succeed when evaluated.

b. Prerequisite knowledge, skills, and attitudes

Once the objectives and the evaluation instruments are designed and developed, you can identify what knowledge, skills, and attitudes (KSAs) the students must bring to the course in order to be successful. It is important to establish a baseline of knowledge for your class, because even with certain prerequisites defined, the class is likely to be diverse and it will require imagination and flexibility to instruct students of varying levels and backgrounds. You should check with the state certification office to obtain their prerequisite requirements for specific courses. For example, in most states, you must pass EMT-Basic before you can take EMT Paramedic.

c. Design of course materials

In the design phase, the "look and feel" of the materials that will be used to conduct the training should be decided upon. For example, guidelines for printed matter, such as the layout of the manual from which an instructor will ultimately teach, are determined. Also, the type of teaching methods, e.g., exercises, simulations, and class activities to be used will be decided, as well as the types of supporting media, such as overheads, videotapes, or graphic art.

For computer-based instruction, the design phase would involve how the material is presented on-screen, and how component parts of the program relate and interact with one another. Similar decisions are made when designing other presentations, such as video or correspondence courses.

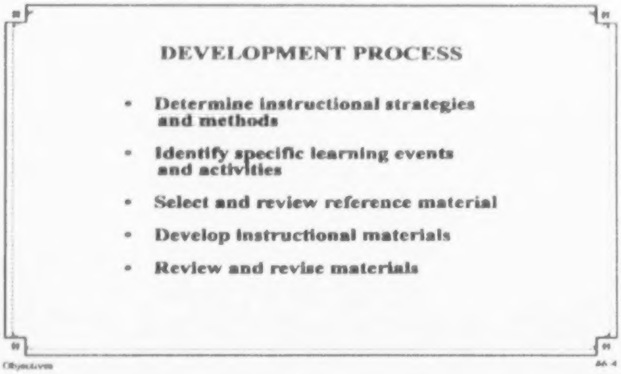
*INSTRUCTOR NOTES* | *LESSON PLAN*

d. Sequence of course content

3. Development phase

**Display** OH #6-4

Show sample Instructor Guide and Student Manual.



**DEVELOPMENT PROCESS**

- **Determine instructional strategies and methods**
- **Identify specific learning events and activities**
- **Select and review reference material**
- **Develop instructional materials**
- **Review and revise materials**

Objectives

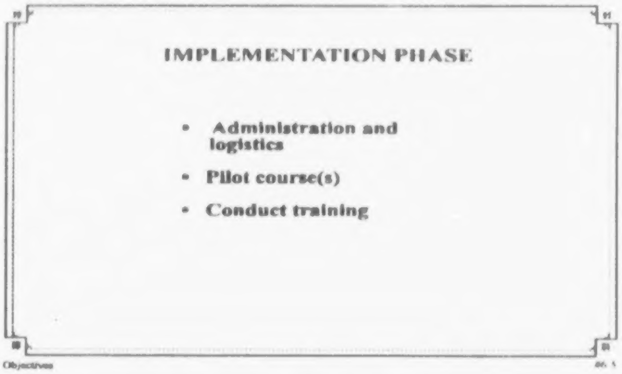
#6-4

a. Content is written

b. Supporting media is created

**Display** OH #6-5

4. Implementation phase



**IMPLEMENTATION PHASE**

- **Administration and logistics**
- **Pilot course(s)**
- **Conduct training**

Objectives

#6-5

a. Administration and logistics

*ADDITIONAL INFORMATION*

d. Sequence of course content

The last step of the design phase is to determine the appropriate sequence for the course content. Take the material and arrange it in a logical order. Build from rudimentary skills and foundational concepts to more advanced analysis and application. Break the end result into manageable sections, and plan for milestones along the way to evaluate progress.

3. Development phase

a. Content is written

In this phase, the course content is drafted, reviewed, and edited. This includes the development of all exercises and activities.

b. Supporting media is created

Any supporting media, such as overheads, films, charts, or posters, will be created. The course materials developed should support your instructional strategies and methods and facilitate learning in the classroom and performance on the job.

4. Implementation phase

a. Administration and logistics

The implementation phase includes planning for the management and logistical elements of fielding the course. This means making arrangements for copies of materials, special equipment, additional instructors, classroom space, notification of students, etc. This part of the implementation process ensures that all materials will be in place when it comes time to teach.

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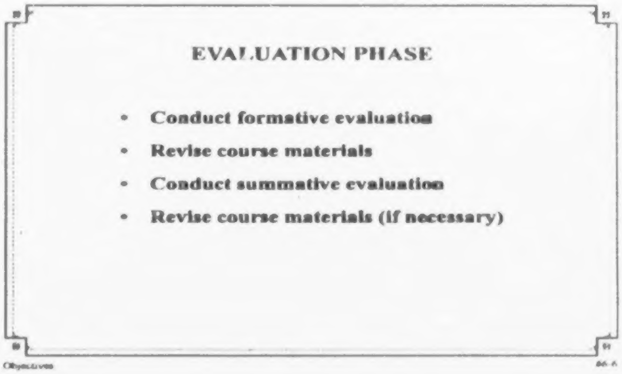
*INSTRUCTOR NOTES* | *LESSON PLAN*

b. Pilot course(s)

c. Conduct training

**Display** OH #6-6

5. Evaluation phase



EVALUATION PHASE

- Conduct formative evaluation
- Revise course materials
- Conduct summative evaluation
- Revise course materials (if necessary)

Objectives

6-6

**Ask** a question

Do you have any questions about the phases of the ISD process?

a. Formative evaluation

b. Summative evaluation

## *ADDITIONAL INFORMATION*

b. Pilot course(s)

Pilot courses are a means to gather valuable information about the training in a realistic setting while there is still an opportunity for revision. As such, pilot courses are part of the development process and are a type of evaluation. See section 5 below, or Lesson 7, Evaluation, for details. If a pilot course is included in the development plan, flaws in the design, content, sequence, and flow of the instruction can be identified during actual delivery and then targeted for improvement. Also, time frames allotted for sections can be redefined.

d. Conduct training—the final test of training materials comes when the course "hits the streets."

5. Evaluation phase

It is important to evaluate instruction during development as well as after course delivery.

a. Formative evaluation

Formative evaluation is a term used to describe the process of revising the course *while it is being developed*.

Formative evaluation uses data collected during the development phase to help *form the instruction*. Data can be collected by working with drafts of the course materials and a representative sample of the target audience. Pilot testing the course is a primary type of formative evaluation.

b. Summative evaluation

Summative evaluation is undertaken when course development is complete. Its purpose is to reach conclusions about how well the instruction worked. The most obvious type of summative evaluation instrument is an end of course test. We'll talk more about evaluation in Lesson 7.

## II. Preparing to Teach Existing Curriculum

A. Variety in curriculum design

1. DOT courses vary
2. Fully-scripted courses, all materials provided
3. Unscripted courses, some materials must be developed

*ADDITIONAL INFORMATION*

## II. Preparing to Teach Existing Curriculum

Understanding the basics of training design and development helps you, as an instructor, prepare to teach existing courses. In this lesson and those that follow, you will learn how to apply each ISD phase: analysis, design, development, implementation, and evaluation, to all aspects of instruction. This will include working with lesson objectives, evaluation instruments, instructional strategies and methods, supporting media, lesson plan development, and course delivery.

### A. Variety in curriculum design

1. DOT courses vary

As an EMS instructor of DOT courses, you will generally not need to develop curriculum. However, the materials you receive from DOT will vary in style, organization, and readiness for delivery.

2. Fully-scripted courses, all materials provided

For example, there are courses, such as the Emergency Vehicle Operators Course (EVOC), that are fully developed and provide all of the course materials you need to teach. Instructional strategies have been devised and are scripted; thus the instructor guide prompts you to "start a discussion" or "conduct an activity." When you order the curriculum, all of the instructor/student guides, handouts, job aids, transparencies, and evaluation instruments are provided. When consistency is an issue, and for novice instructors, a fully-scripted course can be an advantage.

3. Unscripted courses, some materials must be developed

At the other end of the spectrum, there are courses which require more preparation time. For example, EMT-Basic provides you with lesson objectives, a presentation outline, and suggestions for preparation. A list of equipment requirements, both audio-visual and medical is included. There are suggestions for student activities and performance evaluation instruments, but the materials you will need to actually conduct the activity are not included, nor are the test questions or lesson format.

# OBJECTIVES

*INSTRUCTOR NOTES*

**Ask** a question

Can you think of any other questions to ask yourself as you examine the materials you will use to teach?

*LESSON PLAN*

B. Apply your knowledge of ISD to existing curriculum

1. Evaluate and revise provided materials; design and develop supplementary materials
2. Subject matter expertise is an advantage

   Ask yourself the following questions when evaluating course materials:

   - Does the material convey complete and accurate information needed to perform the job/task requirements?
   - Do the evaluation instruments measure what the objectives say the students should be able to do?
   - Are appropriate instructional strategies and media being used to present the message in the most efficient and effective manner?
   - Is the material structured in a logical order, so that the instruction builds from simple to complex?

**B. Apply your knowledge of ISD to existing curriculum**

Existing courses require different amounts of preparation. Your knowledge of the ISD process will help you to produce complete course materials ready for instruction both efficiently and according to established principles of training design.

1. Evaluate and revise provided materials, design and develop supplementary materials

When working with the DOT curriculum, your knowledge of ISD can help you in two ways. You can evaluate the completeness and appropriateness of the materials and revise accordingly. You can also design and develop additional materials when they have not been provided to you.

2. Subject matter expertise is an advantage

As an EMS instructor, you should be a subject matter expert in the area you are teaching. Not only does this enhance your credibility with the students, but it provides you a better base for preparing the materials for instruction.

## III. Learning Objectives

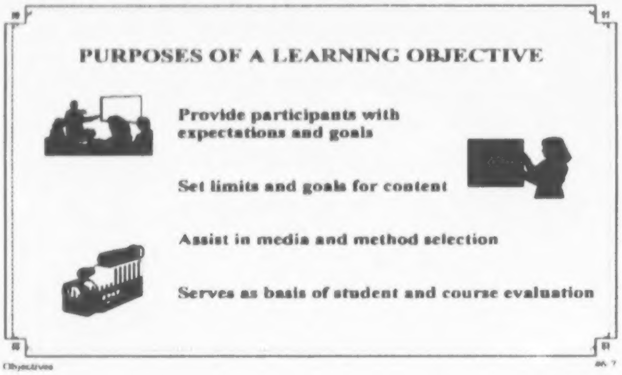
A. Definition

1. Desired outcomes of the training

2. Types of outcomes

**Display** OH #6-7

B. Purpose



PURPOSES OF A LEARNING OBJECTIVE

Provide participants with expectations and goals

Set limits and goals for content

Assist in media and method selection

Serves as basis of student and course evaluation

Objectives

#6-7

1. Effect on participants

   a. Stated goals help participants focus and achieve

*ADDITIONAL INFORMATION*

## III. Learning Objectives

### A. Definition

1. Desired outcomes of the training

Learning objectives are detailed descriptions of what participants should know and/or be able to do when they complete a unit of instruction.

2. Types of outcomes

As you create course and lesson objectives, it is time to begin thinking about exactly what will be required of the student to demonstrate proficiency.

For simplicity, objectives are sometimes referred to as knowledge- or performance-based. Obviously, these overlap; you cannot perform a skill accurately without knowledge. However, you can categorize objectives according to the *primary* type of outcome.

Later in the lesson we will discuss in detail the idea of *learning domains*. Learning domains can be used to categorize objectives according to the type of desired outcome, just like the terms "performance" and "knowledge." In fact, parallels exist between terms. For example, cognitive ⇒ knowledge-based and psychomotor ⇒ performance-based.

The discussion of learning domains also includes the term *affective* in order to describe desired outcomes that involve emotions and attitudes, an integral part of EMS service.

### B. Purpose

1. Effect on participants

a. Stated goals help participants focus and achieve

Participants learn best when they know, at the beginning of a lesson, what they are expected to know or do at the end of a lesson. A properly written list of objectives provides participants with information about the skills, knowledge, and attitudes they are expected to demonstrate. This helps provide a sense of direction and responsibility for learning.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|

- b. Stated objectives encourage active learning
- c. Objectives provide a measurable goal against which students can evaluate their progress

2. Effect on instructor, instruction
   - a. Objectives provide basis for lesson content and delivery
   - b. Objectives serve to focus instruction
   - c. Objectives are the basis of student and course evaluation

ADDITIONAL INFORMATION

b. Stated objectives encourage active learning

Without stated objectives, participants are more likely to become *passive* attendees, since they must rely on the instructor to enable them to achieve goals known only to the instructor. With objectives provided, participants are given the purpose and outcomes expected from the instruction, thereby enlisting their *active* participation in the training.

c. Objectives provide a measurable goal against which students can evaluate their progress.

2. Effect on instructor, instruction

a. Objectives provide the basis for lesson content and delivery

Learning objectives are equally as important for the instructor. Learning objectives are the basis for planning the content, instructional strategies and supporting media to be used in each lesson.

The instructor must deliver the information in a way that directly supports student achievement of objectives. Carefully written objectives point the instructor toward appropriate teaching methods. For example, if the objective says the student must "demonstrate cardiopulmonary resuscitation (CPR) on an adult patient," the instructor must use several teaching methods to ensure student competence. These would probably include lecture, demonstration, and a practical exercise. The method suggests or even dictates the media; i.e., the practical exercise requires a manikin.

b. Objectives serve to focus instruction

The objectives help you cover exactly what is necessary, to set limits and goals for the material to be covered in each lesson. This keeps the lessons sharp and focused.

c. Objectives are the basis of student and course evaluation

Learning objectives help "close the loop" of instruction. Evaluation methods must be selected to ensure that learning objectives are met. Carefully written objectives give the instructor measurable criteria to use when designing and developing evaluation instruments.

*INSTRUCTOR NOTES*

**Conduct** activity

Write a sample objective on a flipchart and solicit ideas for teaching methods. Record responses on a flipchart labelled Delivery Methods.

Offer guidance and feedback. The entire activity should last about 10 minutes.

Sample objectives include:

*Describe correct reaching for log rolls.*

*Defend EMT-Basic treatment regimens for various respiratory emergencies.*

*List signs of adequate air exchange.*

*Describe the structure and function of the cardiovascular system.*

*Demonstrate the maintenance of an automated external defibrillator.*

*Describe how and when to cut the umbilical cord.*

*Demonstrate post delivery care of infant.*

*LESSON PLAN*

C. Activity 6.1—Use Your Objectives

1. Identify teaching methods based on a sample objective
2. Discuss the reasons why certain methods are more effective with specific objectives.

For example, if the student must "demonstrate CPR on an adult patient," written evaluation alone is not an effective evaluation instrument. Although students must have a cognitive understanding of the steps involved in CPR, and that knowledge might be tested in a written exam, the actual performance must be tested via a practical exercise. Actually, the term *psychomotor* implies both "knowing" and "doing," and thus is favored among some educators for its precision.

Later, in Lesson 7, we will discuss evaluation methods in detail. You will see that certain evaluation instruments more effectively measure certain types of learning objectives.

Finally, the effectiveness of the course itself can be evaluated by measuring student performance on the objectives. Weak areas of the presentation can be identified, particularly where students perform poorly, and the course can be improved.

### C. Activity 6.1—Use Your Objectives

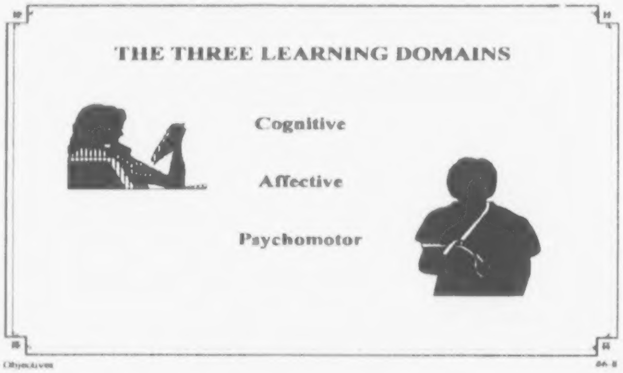
Use a guided discussion to help students identify appropriate teaching methods based on a sample objective. Discuss the reasons why certain methods are a good fit with particular objectives.

*INSTRUCTOR NOTES* | *LESSON PLAN*

**Display** OH #6-8

## IV. Learning Domains

A. What is a learning domain?



THE THREE LEARNING DOMAINS

Cognitive

Affective

Psychomotor

Objectives

#6-8

B. Why classify objectives by learning domain?

1. Expedites the selection of appropriate media and methods

## IV. Learning Domains

### A. What is a learning domain?

Learning, as we discussed in Lesson 4, involves a lasting change in behavior or a newly acquired ability to behave in a particular way. These behavior changes or mastered skills are called learning outcomes, or objectives. Objectives can be classified into categories or domains, according to the type of behavior that is targeted.

There are many theories and approaches regarding objectives. However, most instructional design theorists and practitioners agree upon three learning domains. Each domain has a certain type of behavior as the primary goal of training. The three domains are called cognitive, affective, and psychomotor.

### B. Why classify objectives by learning domain?

On the surface, the concept of learning domains may seem a bit too academic. However, these categories help us, as instructors, to define more specifically exactly what we intend to accomplish and how we will go about it.

Classifying objectives by learning domain:

1. Expedites the selection of appropriate media and methods

By understanding the type of learning outcome that must be achieved, the instructor can select teaching methods and media that will be most effective in achieving that objective. For example, a student will learn a skills-based objective better through observation and hands-on practice than via a lecture or by reading an illustrated manual.

The reason for this is simple. Even though an illustrated manual might portray all of the steps accurately, have excellent pictures, and offer thorough explanations, a student does not get a "feel" for the process by reading and looking at pictures.

*INSTRUCTOR NOTES*

?

**Ask** a question

Can anyone give me an example of a cognitive objective for an [EMS example] class?

*LESSON PLAN*

2. Facilitates the selection of appropriate evaluation tools

C. The Cognitive Domain

1. Description, typical wording of cognitive objectives
2. Cognitive skills are crucial for the EMS professional

For example, no textbook can describe the resistance felt when trying to push a needle through skin. A book cannot tell a student how much pressure to use or how fast to go, at least not with accuracy. It is not until that student actually picks up the syringe and performs the task that full comprehension and competent performance can be achieved.

2. Facilitates the selection of appropriate evaluation tools

Remember, desired outcomes (learning objectives) are the foundation of the entire learning process. Just a basic understanding of learning domains can help an instructor to select the best evaluation instrument. For example, written exams are often used to evaluate objectives in the cognitive domain, while observation and peer evaluation are more often used to evaluate objectives in the affective and psychomotor domains.

We will discuss specific types of evaluation tools in Lesson 7, Evaluation. First, let's describe each domain in more detail.

## C. The Cognitive Domain

1. Description, typical wording of cognitive objectives

We use the term cognitive to describe a goal that relates to knowledge. Objectives that fall into this category often start with words like *describe, list, name, cite,* and *explain*.

2. Cognitive skills are crucial for the EMS professional

The cognitive domain of learning is comprised of mental skills ranging from simple to complex.

Cognitive skills are crucial for the EMS professional. To be effective, the Emergency Medical Technician (EMT) must memorize facts, such as the normal range of temperature or blood pressure for the human body. EMTs must also make assessments during emergency situations. These assessments involve higher level thinking skills.

## OBJECTIVES

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| Introduce students to the basic levels of mental activity from simple to complex. Offer a couple of examples, such as those given in the Additional Information.<br>Non-medical example: Declaration of Independence<br>Medical example: blood pressure | 3. Skill level—complexity of mental activity required<br>The basic levels of mental activity, from simple to complex are to:<br>■ Recall<br>■ Understand<br>■ Apply<br>■ Analyze<br>■ Synthesize<br>■ Evaluate |

## *ADDITIONAL INFORMATION*

3. Skill level—complexity of mental activity required

Educators and theorists have agreed on certain levels of mental activity, according to complexity. Here are the basic levels, using a non-medical and then a medical example:

a. Non-medical example

Recall—on what date was the Declaration of Independence signed?

Understand—why was it signed?

Apply—how does this information relate to a new situation?

Analyze—how can this event be broken down into parts? What factors were necessary and sufficient for this event to occur?

Synthesize—do those conditions exist elsewhere? Could a similar event happen again?

Evaluate—what other actions could have been taken? What would have been the outcomes of alternate actions?

b. Medical example

Recall—what is the normal range of blood pressure for the human body?

Understand—how does blood flow through the body? What factors affect blood pressure?

Apply—how does my understanding of blood pressure relate to this situation?

Analyze—what steps are necessary to prevent damage caused by abnormal blood pressure?

Synthesize—how does my understanding of blood pressure relate to other medical conditions?

Evaluate—what actions are possible, and what are the potential outcomes of alternate actions?

*INSTRUCTOR NOTES* | *LESSON PLAN*

D. The Psychomotor Domain

1. Description, typical wording of psychomotor objectives
2. Types of skills—physical, mechanical, and manual
3. Skill level—degree of coordination required to perform the task

Four levels:

- Imitation or repetition
- Independent action
- Precision
- "Automatic" performance

281

ADDITIONAL INFORMATION

**D. The Psychomotor Domain**

1. Description, typical wording of psychomotor objectives

The term psychomotor refers to objectives that require a student to "do" something. This type of objective starts with words like *perform, administer, produce*, or *exhibit*.

2. Types of skills

The psychomotor domain involves physical, mechanical, and manual skills.

3. Skill level—degree of coordination required to perform the task

Like the other domains, the psychomotor domain is organized according to skill level. The levels are based upon the degree of coordination required to perform a task, and they progress from simple repetition to the highest level of mind/body coordination. For learning to occur most effectively, the student should progress through the levels sequentially.

The lowest psychomotor skill level is imitation, the simple repetition of an action observed. The next is independent action, in which the student must remember what was observed and perform. Accuracy is addressed at the next highest level, in which the student is expected to perform the action precisely as taught, without errors. At the fourth level, the student can function almost unconsciously, leaving his or her mind available to process other information.

High level psychomotor skills are essential for the EMS professional. Emergency situations are often chaotic and traumatic for those involved. Increasing proficiency in psychomotor skills to the level of efficient, unconscious performance allows the EMT to be aware of and handle demanding situations while performing routine procedures quickly and effectively.

## OBJECTIVES

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | 4. How to teach a skill<br>a. Demonstration<br>b. Coaching<br>c. Drilling<br>d. Evaluation |

## ADDITIONAL INFORMATION

4. How to teach a skill

In order to teach psychomotor skills, you have to understand the steps involved.

a. Demonstration

Demonstration is essential. Students must observe the action performed correctly and be able to imitate what they see.

b. Coaching

Coaching is important, because once learned incorrectly, a behavior is difficult to change. As an instructor, you must have sufficient staff on hand during practical exercises to offer immediate feedback to students. First demonstrate, then have students imitate what they observed. Watch their performance carefully. Note any missing steps or flaws in technique that can affect the success of their actions. Use corrective and positive feedback to guide them toward superior performance. Refer to Lesson 1, Instructor Roles and Responsibilities, for an explanation of these types of feedback.

c. Drilling

Drilling is merely repetitive practice. It is important for students to perform the same task over and over, until it becomes second nature. Educators talk about "kinetic memory." This term refers to the fact that, given enough repetition, our bodies begin to perform familiar actions unconsciously; e.g. riding a bike.

d. Evaluation

For most psychomotor skills, it is appropriate to use interim and final evaluations to secure optimal performance.

Interim evaluations can be done several ways. One method is to gradually increase the level of precision or accuracy required of your students. For example, you might allow for three errors when students perform an initial patient assessment during an interim evaluation, but only one for a final. Another form of interim evaluation might be to test on each step of a fairly complicated process. Or, you could change the conditions under which the skill is performed, if they affect difficulty.

*INSTRUCTOR NOTES*

**Conduct** activity

In this activity, students will teach each other simple skills, using the four steps of skill instruction just discussed: demonstration, coaching, drilling, and evaluation.

Tell students that giving instructions clearly is extremely important during all instruction, and particularly when teaching a skill. Have students read reference 6-1 in Appendix B, Giving Instructions.

**Pass out copies of the Demonstration Checklist.**

Be sure to have the observer fill out this form for all trainers.

Collect the checklists if you want to include the results in your evaluation of the Instructor Trainees. The results may also be helpful as you target skill development objectives for each student and help them to achieve competency for the Final Presentations.

*LESSON PLAN*

5. Activity 6.2—Teach a Simple Skill
    a. Break into small groups
    b. Select a trainer, trainee(s), and an observer(s)
    c. Refer to references 6-1 and 6-2 in Appendix B
        - Giving Instructions
        - Demonstration Checklist
    d. Have the observer fill out a Demonstration Checklist for each training session. Rotate the roles of trainer, trainee(s) and observer.

## *ADDITIONAL INFORMATION*

The final evaluation should take place under similar conditions and with the same equipment the EMT would have on the job. Practical skill tests given by the state EMS offices are often the final evaluation of psychomotor skills learned in EMS courses. Prepare your students for their Practical Exams by replicating the exam conditions as closely as possible.

5. Activity 6.2—Teach a Simple Skill

Break into small groups and rotate the roles of trainer, trainees, and observer. The observer should use the Demonstration Checklist in Appendix B to record observations during the "training."

Have each of them teach the others a simple skill. Require them to break the skill down into sequential steps and make sure they use each step of the training process: demonstration, coaching, drilling, and evaluation.

*INSTRUCTOR NOTES* | *LESSON PLAN*

E. The Affective Domain

1. Description, typical wording of affective objectives
2. Types of behaviors addressed by affective objectives
3. Skill level—degree of personal commitment and consistency

*ADDITIONAL INFORMATION*

## E. The Affective Domain

1. Description, typical wording of affective objectives

The affective domain is perhaps the least understood of the three learning domains. However, the delivery of emergency medical services demands an understanding of the emotional and psychological factors that affect a patient's well-being and ultimate recovery. It also demands an understanding of the appropriate attitudes to be exhibited by EMS professionals. This is why affective learning objectives are included in some EMS courses.

Affective objectives might include words like *explain*, *demonstrate*, *display*, or *as evidenced by*.

2. Types of behaviors addressed by affective objectives

The affective domain of learning encompasses attitudes, feelings, and values. Achievement of affective objectives is the most difficult to measure, since it is difficult to know when an attitude, feeling, or value has truly been instilled. In addition, affective learning may be displayed over time, since it can involve long periods of experience, debate, mentoring, and soul-searching. Communication skills are one example of affective learning outcomes. Other instructor skills, such as the ability to appropriately counsel your students, have affective components as well. A proper method of evaluating communication and/or counseling skills might be observation, using a checklist of desired behaviors.

3. Skill level—degree of personal commitment and consistency

Skill in the affective domain involves sensitivity to and awareness of the needs of others. It means reacting in such a way that patients feel safe and confident they are in competent hands. An EMS student who is developing affective skills will demonstrate genuine interest in the emotional and psychological well-being of each and every patient. Over time, the student will act consistently, in accordance with values that have been internalized, not mandated.

In other words, the targeted behaviors of empathy, the ability to engender trust, and the ability to listen attentively will be demonstrated time after time, in stressful situations.

*INSTRUCTOR NOTES*

**Conduct** activity (optional)

Use the scenarios provided in Appendix A if you feel your students need more exposure to the concepts and application of affective domain objectives.

**Conduct** activity

Assign the following topics or create your own:

- Make a pizza
- Wash an ambulance
- Sell a residential property

*LESSON PLAN*

4. Activity 6.3—Writing Affective Objectives (optional)
    a. Write an affective objective
    b. Describe how you would teach the skill

F. Activity 6.4—Objectives by Learning Domain

1. Form small groups; select a reporter, facilitator, and timekeeper. You will have 10 minutes to complete the task
2. Write 2 objectives for each domain on the topic assigned
3. The group reporter will present your conclusions to the class

## V. Learning Your ABCD's—How to Write a Useful Objective

A. Components of a well-written objective: A-B-C-D

1. A is for Audience

*ADDITIONAL INFORMATION*

4. Activity 6.3—The Affective Domain (optional)

This is an optional activity that can be used to further acquaint students with the affective domain. In Appendix A, scenario cards have been provided with descriptions of situations requiring affective skills, as well as a blank card if you prefer to create your own or to have students generate the scenario.

Instruct students to write an objective that targets the desired behavior. Then have them describe how they would teach the affective skill. Debrief as a class.

### F. Activity 6.4—Objectives by Learning Domain

Now give students a chance to apply what they've learned by writing objectives according to the primary learning domain.

Students will work in small groups, selecting a facilitator, reporter, and timekeeper as before. Given assigned topics on which to instruct, students will generate two objectives targeting each learning domain. The reporter will present the results to the class.

## V. Learning Your ABCD's—How to Write a Useful Objective

We have all been the victim of ambiguous objectives, like "The student will have a deeper understanding of the concept of shock." This kind of objective leaves a lot of room for interpretation and provides no definite way to measure achievement of the objective.

A well-stated objective, however, leaves no room for doubt!

### A. Components of a well-written objective

1. A-B-C-D

a. A is for Audience

An effective instructional design will focus on keeping the learner active, attentive, and interested. Therefore, each learning objective should first acknowledge who the learner is (e.g., the new EMS Instructor trainee, the third year EMT). However, if the objectives are being presented to one homogeneous group, the audience can simply be stated as "you" or "participants."

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | 2. B is for Behavior<br>3. C is for Conditions<br>4. D is for Degree |

291

## ADDITIONAL INFORMATION

b. B is for Behavior

Probably the most important part of the learning objective is the stated behavior. What will the participant be able to do at the end of the instruction? Since behavior is an action, the behavior in an instructional objective is always stated as a verb. Furthermore, the behavioral term should be specific and observable. For example, we cannot observe "knowing" or "understanding," and definitely not "deeply understanding." But, we can observe "listing," "building," and "choosing."

Finally, as you write the behavior, try to match it as closely as possible to the real world experience to which the trainee will return. For example, if the trainee must "wrap a bandage around a knee" in the real world, state it that way, rather than "state the method to wrap..."

A list of terms used to describe behavior in instructional objectives is provided in Appendix B for future reference.

c. C is for Conditions

Trainees must be aware of the conditions under which they are expected to execute the behavior stated in an objective. The objective must state what tools, equipment, or other resources will be provided. It must also state any special environmental conditions under which the behavior must be performed. For example, "given a model of the human body, identify the following organs..."

d. D is for Degree

Finally, objectives must be measurable and state the criterion against which acceptable performance will be judged.

An example:

An EMS student (*audience*), given a blank pre-hospital report (*condition*), will complete the report (*behavior*) for a patient with shock (*condition*) with 100 percent accuracy (*degree*).

*INSTRUCTOR NOTES*

**Conduct** activity

This activity provides students with classroom time to work individually on their Final Presentations. The EMT-Basic objectives may need to be refined, perhaps by adding more specific criteria for successful performance. Provide guidance as needed.

Refer students to references 6-3 and 6-4 in Appendix B:

- List of Behavioral Terms
- ABCD...Questions to Ask About Your Objectives

*LESSON PLAN*

B. Activity 6.5—Determine Your Lesson Objectives

1. Take out the EMT-Basic lesson you were assigned for the final presentations
2. Identify which learning domain each objective targets
3. Evaluate the objectives, using the A-B-C-D guidelines
4. Rewrite the objectives as necessary

## VI. Summary

*ADDITIONAL INFORMATION*

## B. Activity 6.5—Determine Your Lesson Objectives

The objectives for this activity are as follows:

Given a lesson from the EMT-Basic course, the EMS instructor trainee will be able to:

- Evaluate existing lesson objectives and determine which are applicable
- Rewrite applicable objectives according to the ABCD guidelines for writing objectives
- Demonstrate the ability, during your final presentation, to use these objectives as the basis for content presentation and student evaluation

This is the first of a series of exercises which will culminate in the final presentations. Students will work with the lesson objectives as stated in the EMT-Basic lesson to which they were assigned and then refine them based upon the principles discussed in this lesson. The EMT-Basic lessons are located in the Final Presentation section.

Students should identify the learning domain targeted by each objective, use the A-B-C-D guidelines provided in Appendix B to evaluate each objective and rewrite as necessary. Students may want to refer to the List of Behavioral Terms located in Appendix B as well. The instructor and/or assistants should provide guidance and feedback.

## VI. Summary

This lesson presented an overview of the five phases of the ISD process and demonstrated the importance of clearly written learning objectives. Objectives let students know precisely what is expected of them and how they will be evaluated. Objectives also provide the instructor with the basis for lesson content and delivery.

The three learning domains, cognitive, psychomotor, and affective, and their relationship to objectives was covered. Finally, the ABCD technique for writing effective objectives was presented.

## *ADDITIONAL INFORMATION*

### References

Heinich, Robert; Molenda, Michael, et.al. "Systematic Planning for the Use of Media" *Instructional Media (Fourth Edition)*. Macmillan Publishing Company. New York. 1993.

Herman, Joan L. (Ed.), *Program Evaluation Kit (Second Edition)*. Sage Publications. Newbury Park, California. 1987.

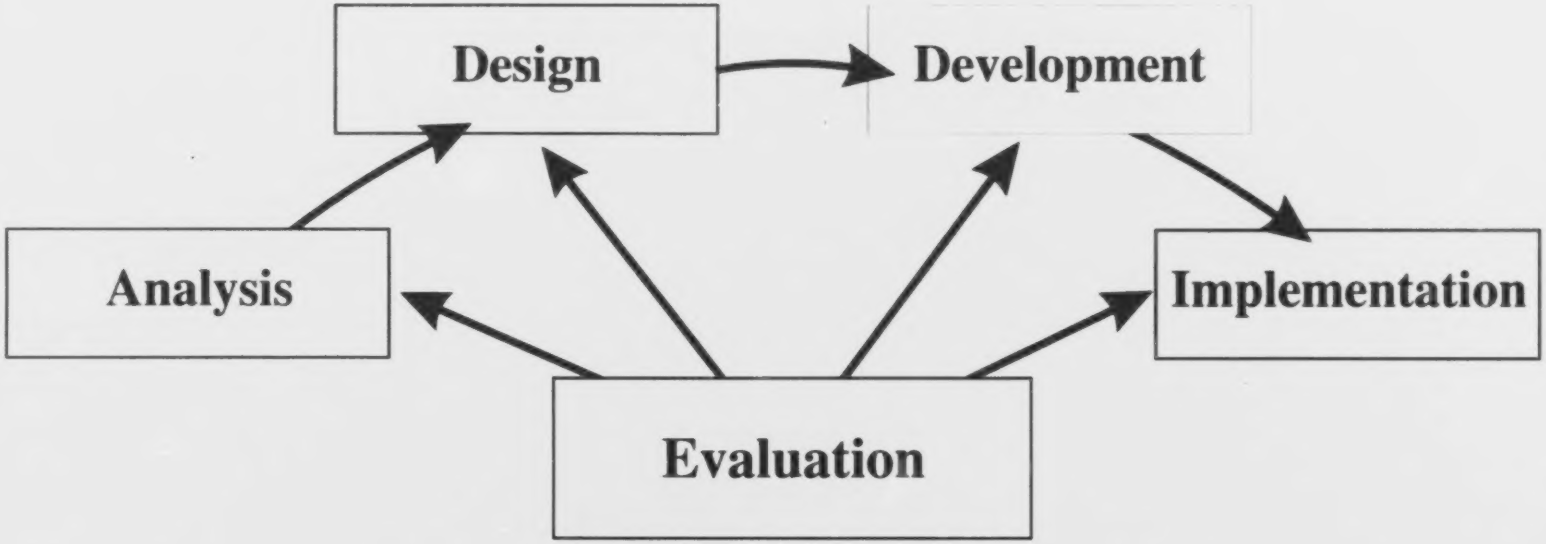
*A set of books intended to assist the user in conducting program evaluation. Useful for experienced and novice program evaluators, each book contains step-by-step procedural guides, real-life examples, and vocabulary definitions. Books in the set include: The Evaluator's Handbook, How to Focus an Evaluation, How to Design a Program Evaluation, How to Use Qualitative Methods in Evaluation, How to Assess Program Implementation, How to Measure Attitudes, How to Measure Performance and Use Tests, and How to Analyze Data.*

Mager, Robert F. "Measuring Instructional Results (Second Edition)" *The New Mager Six-Pack*. Lake Publishing Company. Belmont, California. 1984.

Mager, Robert F. "Preparing Instructional Objectives" *The New Mager Six-Pack*. Lake Publishing Company. Belmont, California. 1988.

Silberman, Mel. "Developing Active Training Objectives" *Active Training*. Lexington Books. New York, New York. 1990.

# INSTRUCTIONAL SYSTEMS DESIGN MODEL



Design

Development

Analysis

Implementation

Evaluation

297

29

# TYPES OF ANALYSIS

- ☒ Job
- ☒ Task
- ☒ Audience
- ☒ Resources
- ☒ Media
- ☒ Constraint
- ☒ Subject Matter

# DESIGN PROCESS

- Develop objectives
- Develop evaluation instruments
- Determine prerequisite knowledge, skills, and abilities
- Design materials
- Determine course sequence and structure

# DEVELOPMENT PROCESS

- Determine instructional strategies and methods
- Identify specific learning events and activities
- Select and review reference material
- Develop instructional materials
- Review and revise materials

# IMPLEMENTATION PHASE

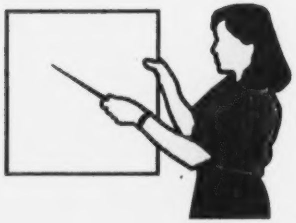
- Administration and logistics
- Pilot course(s)
- Conduct training

# EVALUATION PHASE

- Conduct formative evaluation
- Revise course materials
- Conduct summative evaluation
- Revise course materials (if necessary)

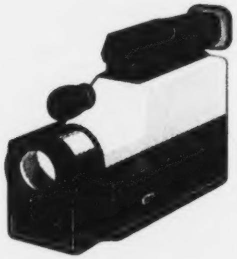
# PURPOSES OF A LEARNING OBJECTIVE

Provide participants with expectations and goals



Set limits and goals for content

Assist in media and method selection



Serves as basis of student and course evaluation

# THE THREE LEARNING DOMAINS

**Cognitive**

**Psychomotor**

**Affective**

# EVALUATION

## 7

Purpose(s) and Types of Evaluation ◄
Evaluation Instrument Development Principles ◄
Cognitive Test Item Development ◄
Affective and Psychomotor Test Item Development ◄
Getting Started—Create Your Own Evaluation Instrument(s) ◄

*OVERVIEW*

**Suggested instructional time for this lesson:** 2 hours

## Introduction

The goal of all instruction is to raise the students' demonstrated understanding or performance. How does a student demonstrate understanding? How do we, as instructors, measure performance? The purpose of this lesson is to give you some background in evaluation methods and then help you to acquire the skills you need to develop effective evaluation instruments yourselves. In this lesson, you will create evaluation instruments that will be part of your lesson presentation package at the end of this course.

## Lesson Objectives

Through group discussion, question and answer sessions, and individual activities, the EMS instructor trainee should be able to:

- State two purposes for evaluation
- Define the concepts of validity and reliability
- List five types of test item types for measuring cognitive objectives.

Using the revised objectives for their EMT-Basic lesson, the EMS instructor trainee should be able to:

- Use the rules of development for various test item types to develop evaluation instrument(s) that effectively measure student achievement of the lesson objectives.

## Materials Needed

- Overhead projector and screen
- Flipchart (prepared objectives)
- Appendix B
- Flipchart and markers

## Instructional Strategies

- Lecture
- Discussion
- Question and answer
- Activities
- Visual aids

*INSTRUCTOR NOTES*

**Go over the objectives** using a flipchart prepared in advance. Post in a visible spot in the room.

**Ask** a question

Ask students what they think are the purposes of evaluation.

**Display** OH #7-1

*LESSON PLAN*

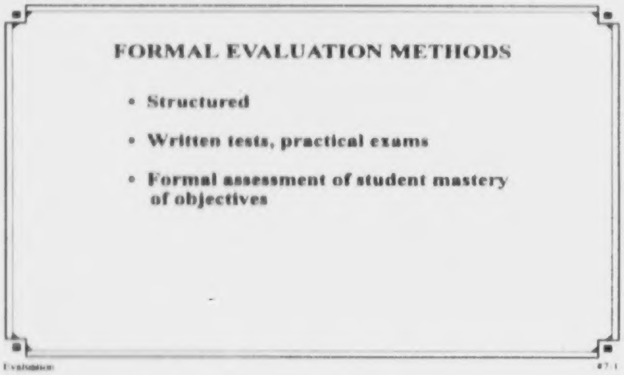
## Objectives

## I. Purposes of Evaluation

A. Measure effectiveness of instruction

B. Measure participant performance

   1. Formal methods



**FORMAL EVALUATION METHODS**

- **Structured**
- **Written tests, practical exams**
- **Formal assessment of student mastery of objectives**

Evaluation

#7-1

314

## *ADDITIONAL INFORMATION*

## I. Purposes of Evaluation

Evaluation should be a continuous, planned process during course development as well as after course completion. There are several types of evaluation that we will cover in this lesson that serve multiple purposes in the instructional development and implementation process.

### B. Measure effectiveness of instruction

It is important to remember that the primary goal of all evaluation is to provide instructors with the necessary information required to make the instruction as effective as possible in order to graduate the most highly trained students possible.

Evaluation of student performance provides a method of determining where there are weaknesses in the instruction. If students are having difficulty with assignments or passing tests, it may indicate problems with your objectives, instructional strategies, and/or your assumptions of the entry-level knowledge or skills of your students.

### A. Measure participant performance

Evaluation is a mechanism of determining student progress toward, or the attainment of cognitive, affective, and psychomotor objectives. The methods of evaluation used can be either *formal* or *informal*.

1. Formal methods

Formal methods of evaluation refer to structured instruments, such as written tests or practical exams that are used to assess student attainment of learning objectives both during and after training.

## EVALUATION

*INSTRUCTOR NOTES*

**Display** OH #7-2

**Ask** a question

Ask students what they think some methods are for evaluating the effectiveness of instruction.

**Write** on flipchart

Write student responses on a flipchart.

**Refer** to handout

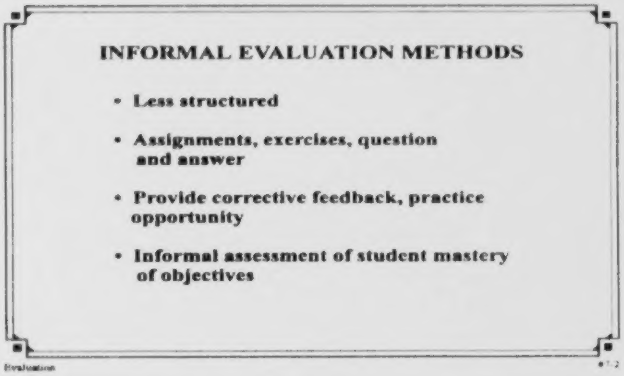
Refer students to Survey Handout in Appendix B.

**Ask** a question

Ask if there are any questions about the purposes of evaluation.

*LESSON PLAN*

2. Informal methods



**INFORMAL EVALUATION METHODS**

- **Less structured**
- **Assignments, exercises, question and answer**
- **Provide corrective feedback, practice opportunity**
- **Informal assessment of student mastery of objectives**

Evaluation

#7-2

3. Pretest/posttest comparison
4. Surveys and questionnaires

5. Peer review and observation

*ADDITIONAL INFORMATION*

2. Informal methods

Informal methods of evaluation refer to less structured means of assessing student achievement of learning objectives, such as student assignments, exercises, oral quizzes, or question and answer sessions, primarily to provide corrective feedback to the student.

3. Pretest/posttest comparison

Administering both a pretest before the course begins and a posttest covering the same material after the course ends is another method of determining how effective the instruction was. A comparison of test scores shows how much performance has improved, and a comparison of performance on individual test items shows where there are weaknesses in the instruction.

4. Surveys and questionnaires

In addition, assessments of the effectiveness of instruction can be gathered through the use of surveys or questionnaires administered during or at the conclusion of training. These surveys primarily evaluate students' reaction to the instruction. A sample of this type of survey used with the Instructor Training Course is provided in Appendix B.

5. Peer review and observation

Peer review can take place during the development of instruction as well as during the actual instruction. Guidelines or checklists covering the areas that you want the peer review or observation to focus on should be provided to those involved.

*INSTRUCTOR NOTES*

**Ask** a question

Ask students if they know what a valid evaluation instrument is.

**Display** OH #7-3

**Ask** a question

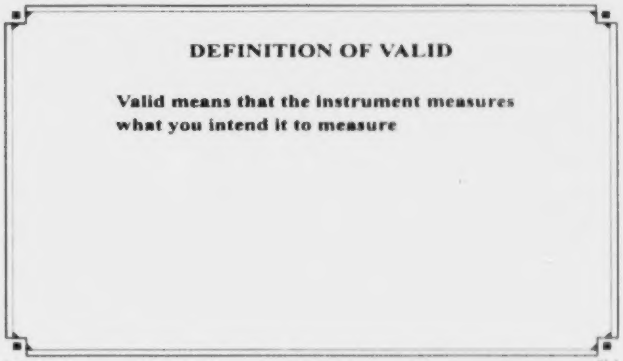
Ask students if they know what a reliable evaluation instrument is.

*LESSON PLAN*

## II. Evaluation Instrument Development Principles

A. Must be based on objectives

B. Must be valid



**DEFINITION OF VALID**

**Valid means that the instrument measures what you intend it to measure**

Evaluation

#7-3

*ADDITIONAL INFORMATION*

## II. Evaluation Instrument Development Principles

### A. Must be based on objectives

Your learning objectives drive evaluation instrument construction. Cognitive, or knowledge-based objectives are best evaluated by written or oral tests. Affective and psychomotor objectives are more accurately measured by practical/performance exams or by observation.

For example, if you want to know if a student can apply emergency care to a superficial burn victim, then the student should be evaluated actually performing the emergency care steps in a simulated emergency situation.

### B. Must be valid

As you develop and refine your evaluation instruments, it is important to ensure that they are both *valid* and *reliable*. Valid means that the instrument measures what you intend it to measure. Basing your evaluation instruments on learning objectives helps ensure that your evaluation instrument is valid. The question to ask yourself to determine whether your evaluation instrument is valid is "Do these items measure the behaviors, conditions, and standards stated in my objectives?" For example, if an objective states "Demonstrate completing a prehospital care report for patients with musculoskeletal injuries" then the test is clear: "Here is a prehospital care report; complete it for a patient with the following specified musculoskeletal injuries."

*INSTRUCTOR NOTES*

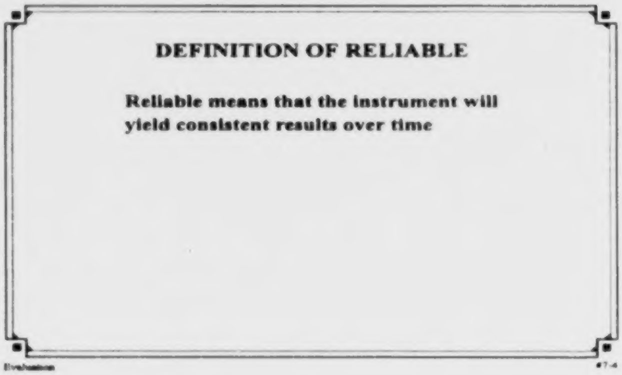
**Display** OH #7-4

**Ask** a question

Ask students if there are any questions about evaluation instrument development principles.

*LESSON PLAN*

C. Must be reliable



**DEFINITION OF RELIABLE**

**Reliable means that the instrument will yield consistent results over time**

Evaluation

#7-4

D. Must be based on learning domain

320

ADDITIONAL INFORMATION

## C. Must be reliable

A reliable evaluation instrument means that it will yield consistent results over time. In other words, if you administer the same practical exam under the same conditions with several classes of students with similar knowledge and experiences, the results should be similar each time it is given.

## D. Must be based on learning domain

There are many different question types that you can use to develop formal evaluation instruments that will measure the degree of mastery of your cognitive, affective, and psychomotor objectives. We will review the most common types, along with guidelines to follow in creating each type.

*INSTRUCTOR NOTES*

**Ask** a question

Ask students what they think the advantages of written and oral tests are.

**Display** OH #7-5

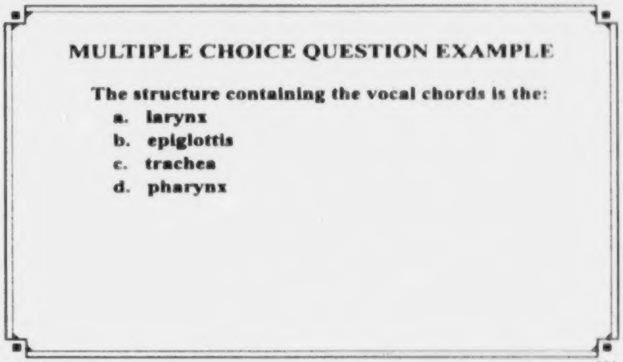
*LESSON PLAN*

## III. Cognitive Test Item Development

A. Written and oral tests

B. Multiple choice questions

1. Stem and distractors



**MULTIPLE CHOICE QUESTION EXAMPLE**

**The structure containing the vocal chords is the:**

**a. larynx**
**b. epiglottis**
**c. trachea**
**d. pharynx**

Evaluation

#7-5

*ADDITIONAL INFORMATION*

## III. Cognitive Test Item Development

### A. Written and oral tests

Cognitive, or knowledge-based objectives are best evaluated by written or oral tests. The advantages of written examinations are that they:

- Can be used efficiently with large numbers of students
- Provide better for consistent scoring

The advantages of oral exams are that they:

- Can evaluate "quick thinking" or reactions
- Can be evaluated by multiple listeners simultaneously

Whether you use written or oral tests should depend primarily on the real-word conditions under which the student will be expected to apply the learned material.

### B. Multiple choice questions

Multiple choice questions are the most common type of written test question used in the EMT community. Multiple choice questions are useful for testing a student's ability to recognize or recall information.

1. Stem and distractors

A multiple choice question is made up of two parts, the *stem* which is the question, and the *distractors*, which are the possible answers. For example:

- The structure containing the vocal chords is the:

a. larynx
b. epiglottis
c. trachea
d. pharynx

BEST COPY AVAILABLE

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| **Write** on flipchart<br>Write rules for developing stem of multiple choice questions. | 2. Rules for development |
| **Write** on flipchart<br>Write rules for developing distractors of multiple choice questions. | |
| **Conduct** activity | C. Group Activity 7.1 - Multiple Choice Questions<br>1. Small groups<br>2. Choose lessons |
| The multiple choice questions created by each group should provide the instructor with an informal method of evaluating knowledge of multiple choice test writing. | 3. Create multiple choice questions<br>4. Post flipchart pages and review |

*ADDITIONAL INFORMATION*

2. Rules for development

Rules for developing the stem are as follows:

- State briefly and clearly.
- Address only one problem or concern per question.
- State as a question or incomplete sentence.
- Use positive rather than negative statements.
- Include as much information in the stem as possible, rather than repeating the same term(s) in the distractors.
- End the stem with "a(n):" if one or more distractors begins with a vowel sound; otherwise end the stem with "a:".

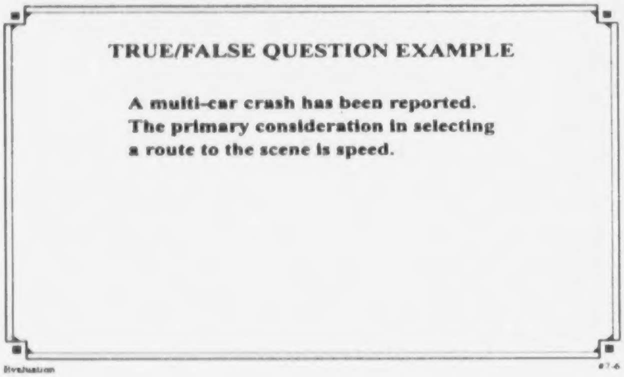
Rules for developing the distractors are as follows:

- Include one choice that is clearly the best.
- Use words and phrases drawn from the instructional material that could be plausible alternatives to the correct answer.
- Distractors should be approximately equal in length and with parallel structure, e.g., all nouns, verbs, phrases.
- Distractors should not be synonymous.
- Use discretion when including humorous distractors. If used, they should be viable distractors as well as being clever.

### C. Activity 7.1

1. Divide students into small groups or pairs.
2. Ask groups to review the lesson objectives from Lessons 1 - 7 of the Instructor Training Course.
3. Ask groups to take 20 minutes to create as many multiple choice questions as possible on flipchart paper from the lesson objectives.
4. Post flipchart pages and review for correctness by comparing each question to its objective and the rules for developing multiple choice questions.

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| **Display** OH #7-6 | D. True/false questions<br>1. Example |



TRUE/FALSE QUESTION EXAMPLE

**A multi-car crash has been reported. The primary consideration in selecting a route to the scene is speed.**

Evaluation

#7-6

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| **Write** on flipchart<br>Write rules for developing true/false questions. | 2. Rules for development |

## D. True/false questions

True/false questions are easier for students to answer than other types of questions because there is a 50% chance of answering correctly. However, true/false questions may be the only appropriate question type in some situations.

1. Example

- A multi-car crash has been reported. The primary consideration in selecting a route to the scene is speed.

2. Rules for development

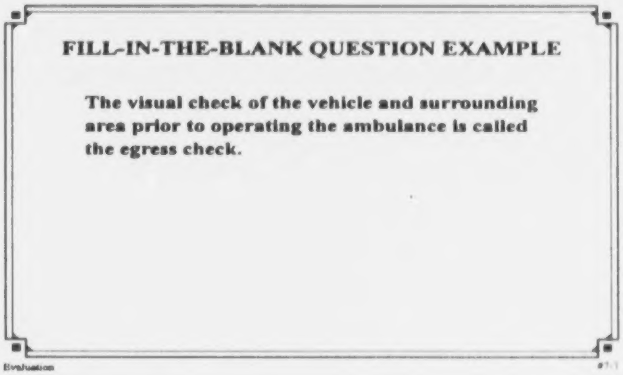
- Avoid statements with absolutes such as "always", "never", "all", "none", or "only". The answer tends to be false.
- Avoid statements with qualifiers such as "usually", "may", or "sometimes". The answer tends to be true.
- Provide for a relatively equal distribution of true and false responses.
- Make true and false statements about the same length.
- Arrange items so that true or false answers appear randomly.

*INSTRUCTOR NOTES* | *LESSON PLAN*

**Display** OH #7-7

E. Fill-in-the-blank questions

1. Example



**FILL-IN-THE-BLANK QUESTION EXAMPLE**

**The visual check of the vehicle and surrounding area prior to operating the ambulance is called the egress check.**

Evaluation #7-7

**Write** on flipchart

Write rules for developing fill-in-the-blank questions.

2. Rules for development

*ADDITIONAL INFORMATION*

**E. Fill-in-the-blank questions**

Fill-in-the-blank questions are best for testing a student's knowledge of specific terms.

1. Example

- The visual check of the vehicle and surrounding area prior to operating the ambulance is called the egress check.

2. Rules for development

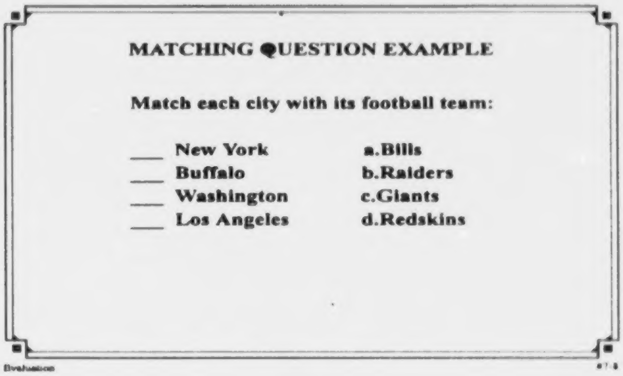
- Do not use fill-in-the-blank questions if the response is so general that many common words could be considered correct.
- Make the blank line about four to six spaces longer than the longest acceptable answer.
- If the blank is preceded by a "a" or "an", use "a(n)" so that you do not give away whether the answer begins with a vowel or a consonant.
- Let students know how many words are in the answer (or if the answer is a number) by indicating this information in parentheses at the end of the question, e.g., "(number)" or "(two words)".

*INSTRUCTOR NOTES* | *LESSON PLAN*

**Display** OH #7-8

F. Matching questions

1. Example



**MATCHING QUESTION EXAMPLE**

**Match each city with its football team:**

**___ New York a.Bills**
**___ Buffalo b.Raiders**
**___ Washington c.Giants**
**___ Los Angeles d.Redskins**

Evaluation #7-8

**Write** on flipchart

Write rules for developing matching questions.

2. Rules for development

## *ADDITIONAL INFORMATION*

### F. Matching questions

Matching questions are good for testing a student's ability to classify information.

1. Example

- Match each city with its football team:

___ New York      a. Bills
___ Buffalo      b. Raiders
___ Washington      c. Giants
___ Oakland      d. Redskins

2. Rules for development

- The set of matching items and responses should consist of three to eight items.
- There can be an equal number of items in each column or more responses than items.
- For ease of student answering and instructor grading, the items and responses should all be on one page.
- All items and responses should be within the same system or organization.

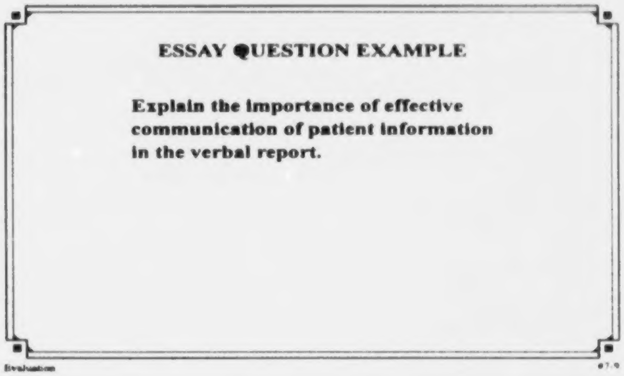
*INSTRUCTOR NOTES*

**Display** OH #7-9

*LESSON PLAN*

G. Essay questions

1. Example



ESSAY QUESTION EXAMPLE

**Explain the importance of effective communication of patient information in the verbal report.**

Evaluation

#7-9

**Write** on flipchart

Write rules for developing essay questions.

2. Rules for development

**Ask** a question

Ask if there are any questions about cognitive test item development.

*ADDITIONAL INFORMATION*

## G. Essay questions

Essay questions are most appropriate for testing higher level cognitive objectives, such as synthesis or evaluation. Essay questions can also be used to assess some types of affective objectives.

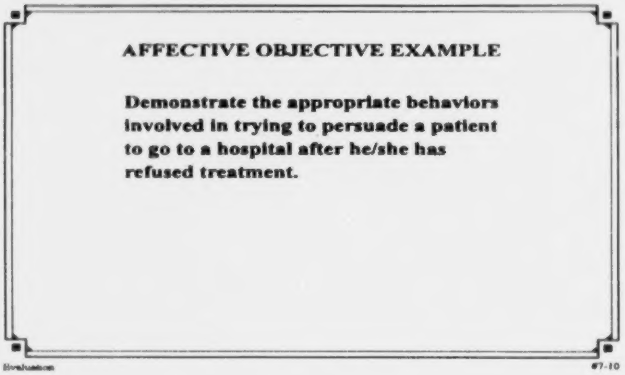
1. Example

- Explain the importance of effective communication of patient information in the verbal report.

2. Rules for development

- Write specific questions that can be answered briefly.
- Prepare an answer key with all the important details you expect students to cover.
- If possible, have students use code numbers rather than their names to decrease scorer bias.
- If there are multiple essay questions, score all papers on the first question before going on to the second.

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| **Display** OH #7-10 | ## IV. Affective and Psychomotor Test Item Development<br>A. Affective objective example |
| **Generate** a discussion<br>Generate a discussion about possible items that could be part of a checklist used to evaluate appropriate behaviors in the situation described. | |



**AFFECTIVE OBJECTIVE EXAMPLE**

**Demonstrate the appropriate behaviors involved in trying to persuade a patient to go to a hospital after he/she has refused treatment.**

Evaluation

#7-10

*ADDITIONAL INFORMATION*

## IV. Affective and Psychomotor Test Item Development

Affective and psychomotor objectives are more accurately measured by practical/performance exams or by observation. Evaluation instruments for these two domains of learning usually take the form of checklists, rating scales, and skill sheets.

### A. Affective objective example

An example of an affective objective that could be evaluated through the use of a checklist or rating scale in a role-play situation is as follows:

- Demonstrate the appropriate behaviors involved in trying to persuade a patient to go to a hospital after he/she has refused treatment.

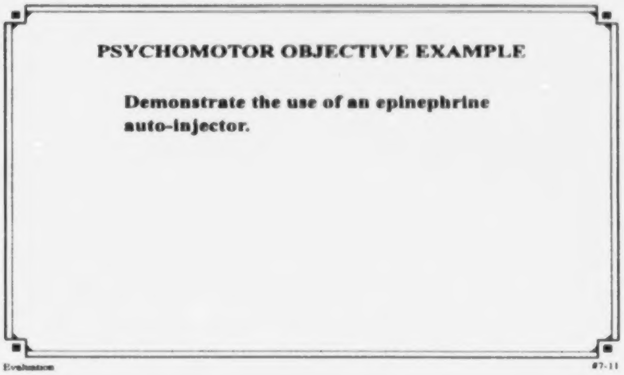
In order to evaluate a student's mastery of this objective, a checklist of behaviors to be exhibited and actions to take in the situation described should be documented. This list would be used be observers to rate the performance of the student in a role-play scenario.

*INSTRUCTOR NOTES*

*LESSON PLAN*

**Display** OH #7-11

B. Psychomotor objective example



**PSYCHOMOTOR OBJECTIVE EXAMPLE**

**Demonstrate the use of an epinephrine auto-injector.**

Evaluation

#7-11

**Refer** to handout

Refer students to Handout #2.

C. Rules for development

**Write** on flipchart

Write rules for developing checklists on flipchart.

## B. Psychomotor objective example

An example of a psychomotor objective that could be evaluated through the use of a skill sheet is as follows:

- Demonstrate the use of an epinephrine auto-injector.

The skill sheet used to evaluate this objective in the EMT-Basic Course is shown in Appendix B.

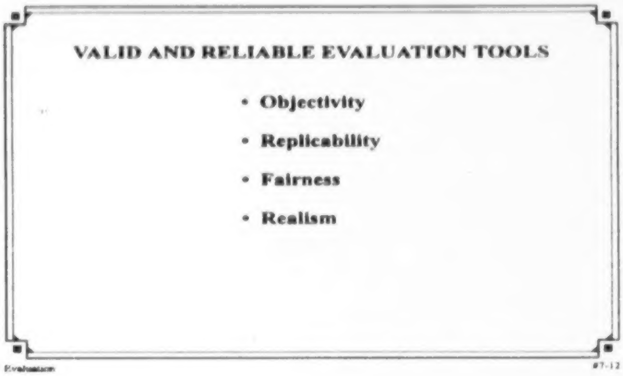
## C. Rules for development

- Steps are described independently of each other and listed in the order in which they should be performed.
- Steps are independently observable and measurable.
- The minimum number of steps necessary to complete the task are included.
- Assign different point values to each step if some are more important or more difficult than others.
- Each evaluator understands scoring criteria.

*INSTRUCTOR NOTES* | *LESSON PLAN*

**Display** OH #7-12

D. Characteristics of valid and reliable performance evaluations



VALID AND RELIABLE EVALUATION TOOLS

- Objectivity
- Replicability
- Fairness
- Realism

Evaluation

#7-12

**Ask** a question

Ask if there are any questions about affective and psychomotor test item development.

**Conduct** activity

E. Individual Activity 7.2 - Evaluation Instruments

1. Refer students to assigned EMT-Basic revised objectives.
2. Begin developing test items for use in Lesson Plan Development Lesson.

## V. Summary

### D. Characteristics of valid and reliable performance evaluations

In addition to the rules stated above for developing practical/performance evaluation tools, be sure to consider the following characteristics in developing and administering performance checklists, rating scales, and skill sheets:

- Objectivity. Is the instrument objective in what it is attempting to measure? Is the observer objective?
- Replicability. Does the instrument measure similar performances across students? Across classes? Across locations?
- Fairness. Are the standards known by the students in advance of testing? Has practice been provided with similar instruments and scenarios during training?
- Realism. Is the situation under which the students are being tested plausible? Are external distractions realistic? Is the stress level similar to that in the field environment?

Remember that you are evaluating performance, not the student. When using checklists and rating scales, be sure that your individual biases regarding students do not enter into your evaluation of performance.

### E. Activity 7.2 - Evaluation Instruments

Instructor trainees should refer to the revised objectives from the EMT-Basic lesson they were assigned for final presentations. The students should begin developing test items which could be used to measure student performance against the objectives. If time does not permit completion of the test items, students can finish them in the Lesson Plan Development Lesson.

## V. Summary

This lesson presented information on the purposes and types of evaluation instruments as well as the principles to consider when developing evaluation instruments. It also addressed the various test item types to be used to evaluate cognitive, affective, and psychomotor objectives. The importance of valid and reliable evaluation instruments was covered. Practice was provided in developing various question types based on lesson objectives.

*INSTRUCTOR NOTES* | *LESSON PLAN*

**References**

## *ADDITIONAL INFORMATION*

### References

Glasgow, Zita; Schumacher, Sanford. "Handbook for Designers of Instructional Systems" Preliminary printing by Applied Science Associates of a Technical Report to be published by the Air Force Human Resources Laboratory. Wright Patterson Air Force Base, Ohio. 1974.

Heinich, Robert; Molenda, Michael, et.al. "Systematic Planning for the Use of Media" *Instructional Media (Fourth Edition).* Macmillan Publishing Company. New York. 1993.

Herman, Joan L. (Ed.), *Program Evaluation Kit (Second Edition).* Sage Publications. Newbury Park, California. 1987.

> *A set of books intended to assist the user in conducting program evaluation. Useful for experienced and novice program evaluators, each book contains step-by-step procedural guides, real-life examples, and vocabulary definitions. Books in the set include: The Evaluator's Handbook, How to Focus an Evaluation, How to Design a Program Evaluation, How to Use Qualitative Methods in Evaluation, How to Assess Program Implementation, How to Measure Attitudes, How to Measure Performance and Use Tests, and How to Analyze Data.*

Mager, Robert F. "Measuring Instructional Results (Second Edition)" *The New Mager Six-Pack.* Lake Publishing Company. Belmont, California. 1984.

Mager, Robert F. "Preparing Instructional Objectives" *The New Mager Six-Pack.* Lake Publishing Company. Belmont, California. 1988.

Silberman, Mel. "Developing Active Training Objectives" *Active Training.* Lexington Books. New York, New York. 1990.

# FORMAL EVALUATION METHODS

- Structured
- Written tests, practical exams
- Formal assessment of student mastery of objectives

# INFORMAL EVALUATION METHODS

- Less structured
- Assignments, exercises, question and answer
- Provide corrective feedback, practice opportunity
- Informal assessment of student mastery of objectives

# DEFINITION OF VALID

**Valid means that the instrument measures what you intend it to measure**

# DEFINITION OF RELIABLE

**Reliable means that the instrument will yield consistent results over time**

# MULTIPLE CHOICE QUESTION EXAMPLE

The structure containing the vocal chords is the:

a. larynx
b. epiglottis
c. trachea
d. pharynx

# TRUE/FALSE QUESTION EXAMPLE

A multi-car crash has been reported. The primary consideration in selecting a route to the scene is speed.

# FILL-IN-THE-BLANK QUESTION EXAMPLE

**The visual check of the vehicle and surrounding area prior to operating the ambulance is called the egress check.**

# MATCHING QUESTION EXAMPLE

Match each city with its football team:

___ New York
___ Buffalo
___ Washington
___ Oakland

a. Bills
b. Raiders
c. Giants
d. Redskins

# ESSAY QUESTION EXAMPLE

**Explain the importance of effective communication of patient information in the verbal report.**

# AFFECTIVE OBJECTIVE EXAMPLE

**Demonstrate the appropriate behaviors involved in trying to persuade a patient to go to a hospital after he/she has refused treatment.**

# PSYCHOMOTOR OBJECTIVE EXAMPLE

**Demonstrate the use of an epinephrine auto-injector.**

# VALID AND RELIABLE EVALUATION TOOLS

- **Objectivity**
- **Replicability**
- **Fairness**
- **Realism**

# INSTRUCTIONAL STRATEGIES AND METHODS

## 8

Parts of Instruction ◄
Teaching Methods ◄
Getting Started—Decide on Your Methods ◄
Communication and Presentation Skills ◄

# INSTRUCTIONAL STRATEGIES AND METHODS

## *OVERVIEW*

**Suggested instructional time for this lesson:** 3 hours

### Introduction

Instructional strategies and methods are the heart of your course presentation; and selecting the appropriate ones will determine how effective your training will be. This lesson covers strategies and methods, their advantages, disadvantages, when to use them, and how to use them. It also addresses instructor skills, such as effective communication, questioning, and presentations, and provides students the opportunity to practice those skills.

### Lesson Objectives

Through group discussion, question and answer sessions, and individual and group activities, the EMS instructor trainee should be able to:

- Define instructional strategies
- List the four parts of instruction
- List six teaching methods
- Describe two advantages and two disadvantages for each method listed
- Determine an appropriate teaching method given an objective
- Apply the principles of active listening in a roleplay exercise
- List five guidelines for effective presentations

Given the newly written objectives for their EMT Basic lesson, the EMS instructor should be able to select and design the appropriate instructional strategies that will facilitate student achievement of the new lesson objectives.

### Materials Needed

- Overhead projector
- Flipchart and markers
- Handouts
- Video camera (if available)
- TV (if video camera is used)
- VCR (if video camera is used)

### Instructional Strategies

- Lecture
- Question and answer
- Discussion
- Activities
- Practice/simulation

*INSTRUCTOR NOTES*

Ask for a volunteer to **read each objective**, using a flipchart prepared before class. Ask if there are any questions as you go over each one. Then, post them prominently in the room.

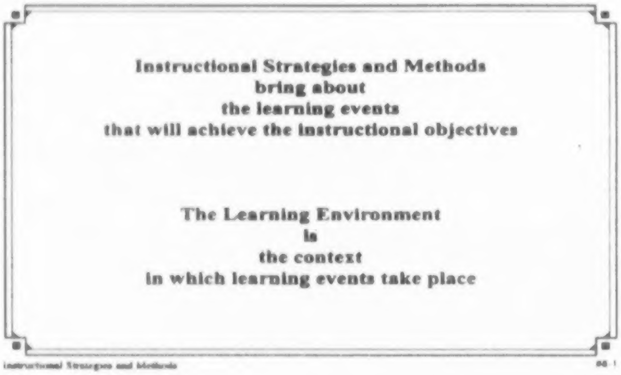
**Display** OH #8-1

*LESSON PLAN*

## Lesson Objectives

## I. Introduction to Instructional Strategies and Methods

A. Overview



**Instructional Strategies and Methods**
**bring about**
**the learning events**
**that will achieve the instructional objectives**

**The Learning Environment**
**is**
**the context**
**in which learning events take place**

Instructional Strategies and Methods #8-1

1. Purpose/benefit of this lesson
2. Definitions
    a. Strategy

*ADDITIONAL INFORMATION*

## I. Introduction to Instructional Strategies and Methods

### A. Overview

As an instructor, you are responsible for determining the instructional strategies and methods that will best facilitate the attainment of the course and lesson objectives.

1. Purpose/benefit of this lesson

This lesson is designed to give you an overview of instructional strategies, to acquaint you with various teaching methods, to provide guidance in methods selection, and practice in their application.

All of the objectives for this course have one purpose, to help you develop the skills you need as an EMS instructor. This lesson will teach you how to design an appropriate mix of well-designed learning events, in order to motivate your future students and increase their ability to apply what they've learned on the job. The lesson also addresses key instructor skills.

2. Definitions

a. Strategy

The term strategy originally applied to the art of military command. In an educational setting, your instructional strategy defines the overall plan for accomplishing the course goals. To develop an effective strategy, you need to know what it is you are trying to accomplish. For example, the primary objective of this course is to produce knowledgeable and competent instructors. For an ambulance course, it may be to produce competent, safe, and knowledgeable ambulance drivers. As we have discussed, these outcomes can include knowledge components as well as performance components. Knowing the desired outcomes, you then devise a strategy that will work.

Do you remember back to the training delivery selection process and the discussion about how courses can be delivered in different ways? That selection process concludes with an instructional strategy. The teaching methods that you select will support that strategy.

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# INSTRUCTIONAL STRATEGIES AND METHODS

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| | b. Methods |
| **Ask** a question<br>What are some things we know about adult learners? | 3. Review Lesson 4, The Adult Learner<br>a. Characteristics of adult learners |
| **Write** on flipchart<br>Record responses on a whiteboard or flipchart labelled Adult Learners. | b. These characteristics should impact your instructional strategy |

*ADDITIONAL INFORMATION*

b. Methods

A method is a regular, systematic, and detailed way of accomplishing anything. So, your overall strategy is implemented through the use of specific methods.

Some objectives require knowledge acquisition and then hands-on practice, such as the ability to operate a piece of equipment or use a tool. To master these objectives, students require learning events that allow them to operate equipment or use a tool.

Other objectives require knowledge acquisition and perhaps application through simulation. For example, to develop competence in certain instructor roles, you may need to roleplay realistic scenarios or to watch others handle situations similar to what you will experience and then apply what you've learned.

We will present a variety of teaching methods and discuss the advantages and disadvantages of each in relation to cognitive, affective, and psychomotor objectives.

3. Review Lesson 4, The Adult Learner

a. Characteristics of adult learners

- Self-directing
- Experienced
- Ready to learn-motivated
- Problem centered

b. These characteristics should impact your instructional strategy

Adults master skills and concepts and react differently in a classroom situation than children. This lesson will help you to develop an instructional strategy and select teaching methods that will meet the unique needs of adult learners.

But before we discuss the various methods, let's review the basic components of any instruction.

*INSTRUCTOR NOTES*

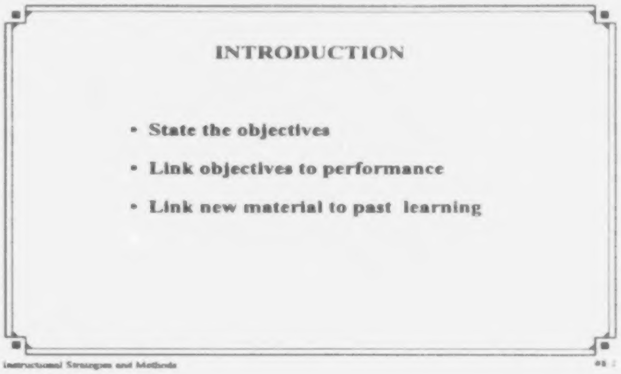
*LESSON PLAN*

**Display** OH #8-2

Reveal each line as you discuss it.

B. The Parts of Instruction

1. Introduction



INTRODUCTION

- State the objectives
- Link objectives to performance
- Link new material to past learning

Instructional Strategies and Methods

#8-2

**Ask** a question

How were the objectives for this lesson presented?

- Students read aloud
- Instructor explained
- Posted in the room

a. State the objectives

b. Link objectives to performance

**Ask** a question

How can instructors link the new material to past learning? Solicit responses, discuss, conclude with these points.

- To previous lessons
- Through examples
- Ask students to share their knowledge and experiences

c. Link new material to past learning

## B. The Parts of Instruction

While there are a variety of models describing instruction, most models include this sequence: Introduction, Presentation, Practice, and Test.

1. Introduction—a brief but important part of instruction.

a. State the objectives

The introduction begins with telling students what the objectives are. Do this at the course and lesson level. When students know precisely what is expected of them, they are able to focus and achieve.

In this course, certain methods are used to communicate and reinforce objectives. For example, you can prepare an overhead or a flipchart before class. You can post them in the room. You can ask students to read them aloud and ask for questions. And, of course, the objectives should be included in the student materials. Whether you use one or all of these methods, make sure that the objectives are stated and understood.

b. Link objectives to performance

The second part of the introduction is linking the objectives to performance. Sometimes instructors assume that students know why they are working toward the objectives. This is not always the case. Make the connection clear. This gives students a clear sense of purpose.

This should be done at the course, lesson, and individual learning event level. For example, when conducting an activity, the objective(s) *for that event* should be stated and understood.

c. Link new material to past learning

Finally, the introduction relates new learning to past learning (particularly important for adult learners) in several ways. First, during a course with a series of lessons, you may briefly review material from past lessons and show how the new material relates. Or, you may describe the lesson in terms of existing knowledge by using examples or asking students to relate what they are learning to their own experiences.

*INSTRUCTOR NOTES*

**Ask** a question

Does anyone remember how we linked this lesson to existing knowledge?

- Reviewed characteristics of the adult learner and learning theory

**Write** on flipchart

What are some examples of material that is presented during an EMS course?

Record responses on a flipchart labelled Organizing New Material.

**Display** OH #8-3

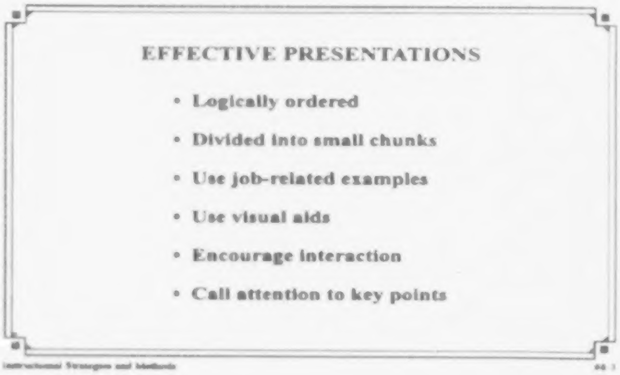
Discuss how these guidelines could be applied to the examples given above.

*LESSON PLAN*

2. Presentation

   a. Present the new material

   b. Guidelines for delivering new information



EFFECTIVE PRESENTATIONS

- Logically ordered
- Divided into small chunks
- Use job-related examples
- Use visual aids
- Encourage interaction
- Call attention to key points

## *ADDITIONAL INFORMATION*

2. Presentation

a. Present the new material

In the presentation portion of a learning event, the instructor presents new concepts, rules, information, processes, and/or demonstrates new skills. From research, we know several things about how to introduce new material most effectively.

b. Guidelines for delivering new information

- Organized and presented in a logical order

  Students learn more from presentations that are logically organized and highly structured. Material can be organized in a number of ways, such as chronologically, or in order of complexity or importance. Generally speaking, topics should proceed from the simple to complex. However, the most important information can be introduced either first or last, depending upon the topic.

  All three learning domains require the logical ordering and presentation of new material. When the material demands movement, or kinesthetic learning, such as the correct way to tango or waltz, you might first demonstrate how to do it "right," so students know what to aim for. Then, you probably should break the entire dance down into small sections or individual movements, as discussed below. Once students have mastered each part, they can more easily pull each element into a cohesive whole.

  Some information can be more easily understood by seeing a picture than listening to an explanation, for example, the concepts of symmetry and balance, which are presented in Lesson 9. The organization of visual material is discussed in Lesson 9 as well.

- Break into sections or component parts

  Students learn more from presentations that are delivered in "bite-sized" pieces or relatively small sections.

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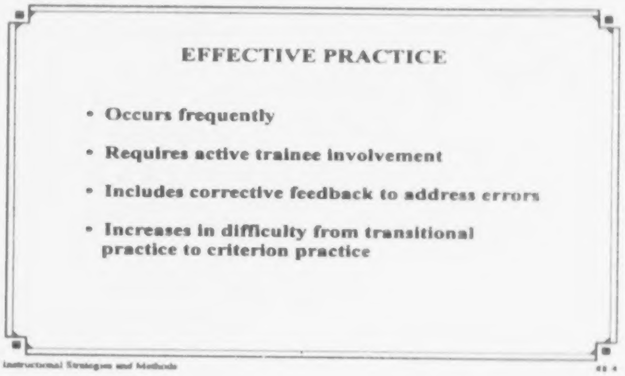
*INSTRUCTOR NOTES*

**Display** OH #8-4

*LESSON PLAN*

3. Practice



EFFECTIVE PRACTICE

- Occurs frequently
- Requires active trainee involvement
- Includes corrective feedback to address errors
- Increases in difficulty from transitional practice to criterion practice

Instructional Strategies and Methods

  a. Absolutely essential for learning

*ADDITIONAL INFORMATION*

Even smaller chunks are needed in the following situations:

☐ When the information is complex or unfamiliar
☐ When a group is too large for one-on-one guidance during practice
☐ When delivery is rapid

However, the information should still be organized so that closely related ideas or steps in a process are seen as connected and presented accordingly.

- Key points should be highlighted

- New information should be related to past learning, through real-life or job-related examples.

- Instructional aids should be used

  The use of instructional aids is encouraged, as students remember more when they see and hear or see and do, rather than when they simply listen to a lecture, for example.

- Provide opportunities to interact

  Lecture presentations should be interspersed with many opportunities for interaction through the use of questions, discussion, practice, and activities. This ensures that learners are involved; consequently, they are more likely to absorb, process, and apply new material as it is presented.

3. Practice

a. Absolutely essential for learning

Practice is absolutely essential for learning. A skill that is not mastered during training is unlikely to be mastered, remembered, and used later. Ideally, practice should occur frequently and immediately after the presentation of relatively small chunks of material. The most effective practice requires active student involvement.

*INSTRUCTOR NOTES*

**Ask** a question

Tell me some ways to simplify early practice.

**Write** on flipchart

Record responses on a board or flipchart labelled Simplifying Practice

Complete, using the list below:

- Break down a task into component parts
- Lower the standards of performance
- Remove additional factors bearing on practice
- Simple responses first, then more complex

*LESSON PLAN*

b. Errors should be corrected every time, right away

c. Types of practice

d. Transitional practice

  (1) Simplify early practice

  (2) Maximum guidance in early practice, gradually decreasing

b. Errors should be corrected every time, right away

Initial practice should be simple enough to reduce the risk of error. When errors occur, don't be afraid to correct them, every time, and right away. Once a student practices something incorrectly, it will be much harder to perform correctly. Trial and error practice is generally not effective.

c. Types of practice

Practice can be included in your lesson plan in several ways. For example, during a short pause in a presentation, the instructor could ask students to think through a response or to picture themselves performing an activity. This is sometimes called covert, or non-observable practice. Observable, overt, practice can range from a simple response to a question to a team activity demonstrating a complex procedure learned during the course of a 5-day workshop. Culminating exercises that demonstrate mastery of a broad area of course content are important in assessing overall mastery, but they should always be preceded by opportunities to practice smaller units of material. These opportunities are called *transitional practice*.

d. Transitional practice

Transitional practice helps trainees move from the skill level they have when they begin the course to the level of competence required for successful completion of the course. There are several ways to simplify early practice.

(1) Simplify early practice

(2) Maximum guidance in early practice, gradually decreasing

The instructor provides maximum guidance in the beginning of practice. This guidance can be in the form of corrective feedback, a cue about the type of answer you're looking for, an example of a similar situation, or even a review of the relevant material before practice begins. Guidance increases the likelihood of correct performance.

As the student gains confidence and competence, guidance should decrease accordingly. Final practice should be unguided attempts to perform under the same conditions as evaluation will occur. This is called *criterion practice*.

**Display** OH #8-5

Refer students to Lesson 2 for a discussion of positive, constructive, and corrective feedback.

**Ask** a question

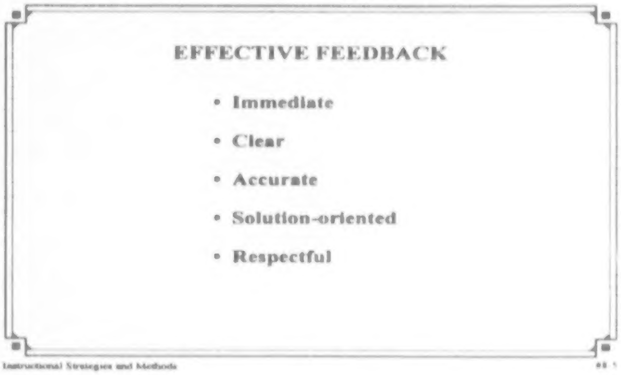
How was this section on the parts of instruction organized?

- Chronologically

Was the material effectively organized?

How much material was presented in each section?

e. Feedback



**EFFECTIVE FEEDBACK**

- **Immediate**
- **Clear**
- **Accurate**
- **Solution-oriented**
- **Respectful**

Instructional Strategies and Methods

4. Test

   a. Final, unguided evaluation

   b. Conditions of performance

   c. The criterion is the standard set by the objectives

*ADDITIONAL INFORMATION*

e. Feedback

Feedback is given throughout all practice. Your feedback should be immediate, clear, and accurate. If the exercise has been performed correctly, provide positive reinforcement. If there are incorrect areas of performance, begin by reinforcing positive aspects. Then use corrective feedback to guide the student into a more accurate response.

4. Test

a. Final, unguided evaluation

A test is final, unguided performance of the learned skill by a trainee.

b. Conditions of performance

Tests are performed under conditions as close to those on the job as possible and should match those set forth in the objectives.

c. The criterion is the standard set by the objectives

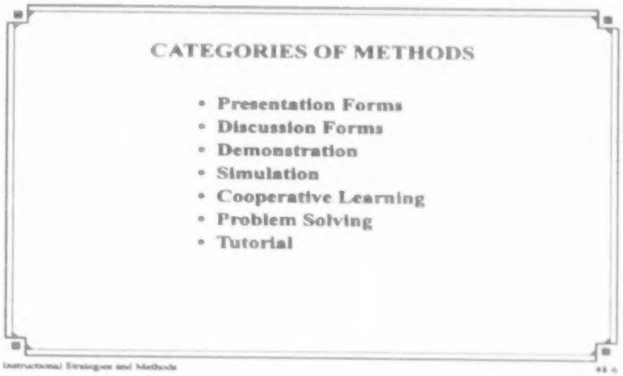
*INSTRUCTOR NOTES* | *LESSON PLAN*

C. Teaching methods

1. Using a variety of methods enhances instruction
2. The media, the message, and the methods
3. Categories of methods

**Display** OH #8-6

Note that there are seven categories of teaching methods here, each with specific applications.



CATEGORIES OF METHODS

- Presentation Forms
- Discussion Forms
- Demonstration
- Simulation
- Cooperative Learning
- Problem Solving
- Tutorial

Instructional Strategies and Methods #8-6

*ADDITIONAL INFORMATION*

## C. Teaching methods

1. Using a variety of methods enhances instruction

You will generally use several teaching methods during the presentation of a lesson. Familiarity with a number of techniques allows you to select the best method for a particular objective, maintain the group's interest, and to reach different types of learners.

2. The media, the message, and the methods

It is helpful to distinguish between *what* must be communicated in an instructional setting—the message—and the vehicles that are used to get the message across—the media and the methods. Instructional media are carriers of information, e.g. printed materials, slides, films, etc. Instructional methods are those procedures of instruction that are selected to help learners achieve objectives, that is, to understand and apply the message. Lesson 9, Design and Use of Media, will provide you with details about instructional media; this lesson presents a variety of instructional methods.

3. Categories of methods

Presented here are seven categories of instructional methods, each with more specific applications. Refer students to Appendix B, Handouts/ References, for a matrix of these methods which includes: definition, most appropriate use, advantages/disadvantages, and information about how to instruct using each method.

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*INSTRUCTOR NOTES*

**Refer** to handout

Refer to Appendix B for a matrix of each of these methods which includes:

- Definition
- Most appropriate use
- Advantages/disadvantages
- How to instruct

**Refer** to handout

Refer students to an evaluation tool, the Demonstration Checklist, located in Appendix B.

*LESSON PLAN*

a. Presentation forms, including lecture
    - Lecture
    - Reading assignments

b. Discussion forms
    - Structured inquiry
    - Discussion
    - Small group discussions

c. Demonstration

## *ADDITIONAL INFORMATION*

a. Presentation forms, including lecture

A presentation occurs when a source disseminates information. The source could be a lecturer, an audiotape, a filmstrip, or even a textbook. It is one-way communication, typically controlled by the source. For example, as part of a museum tour, you might check out a tape player with headphones. The audiotape and accompanying map guide you through the exhibits and present information about each display. Although you could stop and rewind the tape, there is no opportunity to question the source and clarify the message.

- Lecture
- Reading assignments

b. Discussion forms

Discussion involves interaction between the source and the learners. This interaction makes a significant contribution to the learning process. It is useful from the point of view of the instructor, because it is one way of assessing the knowledge, skills, and experience of the group. From the student's perspective, discussion greatly enhances the processing, retention, and application of the content. The discussion method also establishes a cooperative, collaborative learning environment, essential for adult learners.

- Structured inquiry
- Discussion
- Small group discussions

c. Demonstration

A demonstration show a process to be learned or the way something works. The objective might be for the student to imitate how to do what is demonstrated, to simply show how something works, or for the student to adopt the attitudes and values illustrated in the modelled behavior. On-the-job training can be a form of demonstration which allows question and answers between an experienced worker and a newcomer. A job aid for evaluating demonstrations is included in Appendix B.

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| | d. Simulation<br>■ Roleplays<br>■ Experiential learning<br>■ Field trips<br>e. Cooperative learning<br>■ Brainstorming<br>■ Team development<br>■ Small group projects<br>f. Problem solving<br>■ Case studies and critical incidents<br>■ Games<br>■ In-basket exercises |

*ADDITIONAL INFORMATION*

d. Simulation

Simulation methods provide an approximation of real-life situations, thereby offering realistic practice and/or exposure to on-the-job conditions without the expense or risks otherwise involved. Interpersonal skills and laboratory experiments are popular subjects for simulations.

- Roleplays
- Experiential learning
- Field trips

e. Cooperative Learning

A primary advantage of cooperative learning is that these methods more closely approximate the working environment, in which employees rely on one another to accomplish goals. A growing body of research indicates that students learn from each other as they work in teams.

- Brainstorming
- Team development
- Small group projects

f. Problem solving

Presenting students with challenging problems is a teaching method which stimulates thought, utilize higher level thinking skills, and encourages intense participation. Some of these methods are better for some content than others. For example, games are frequently employed in business schools to develop decision-making skills. Teams work together to address the problems of a mythical company.

- Case studies and critical incidents
- Games
- In-basket exercises

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| | g. Tutorial<br>■ Computer-assisted instruction<br>■ One-on-one instruction<br>D. Methods to enhance learning transfer<br>1. Exercises |

*ADDITIONAL INFORMATION*

g. Tutorial

Tutoring is most often done on a one-on-one basis, but the source can be a computer, an instructor, learning lab personnel, or another student. The hallmarks of tutored instruction include the presentation of material, student responses, and feedback regarding accuracy. Tutors provide practice until the learner can demonstrate competence.

- Computer-assisted instruction
- One-on-one instruction

**D. Methods to enhance learning transfer**

Learning transfer occurs when a student is able to apply the concepts and skills learned in a training environment to on-the-job practices. Learning transfer is enhanced when retention is increased; obviously things remembered can then be applied. The instructional methods and media that you choose have an impact on retention and transfer. It has been pointed out that the use of visual aids, frequent practice, and breaking information into small yet cohesive sections increases retention. The use of instructional methods that reproduce on-the-job conditions as closely as possible has been shown to greatly enhance learning transfer. For example, case studies, in-basket exercises, and roleplay activities.

1. Exercises

The more closely training is related to actual job performance, the more effective the training will be. In the introduction, link objectives to on-the-job tasks. In the presentation, use examples from the work environment. Draw on your own experience to enhance the presentation's relevance. Be cautious, however, of "war stories." It is easy for students to become distracted by interesting stories; examples should always support the lesson objectives.

Practice and testing should focus on those skills that will be used in work performance, and conditions should simulate those on the job as closely as possible.

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*INSTRUCTOR NOTES*

**Write** on flipchart

List the job aids used in this course so far. Record on a flipchart labelled Job Aids.

**Ask** a question

Do you have any suggestions for additional job aids?

Would you change the ones we've used so far? If so, how?

**Refer** to handout

Refer students to the Sample Action Plan in Appendix B.

**Conduct** activity

Using the objectives and evaluation plan developed in previous lessons, students should decide upon the teaching methods they will use in their final presentation.

Instructional media will be developed in Lesson 9, and the lesson plan in Lesson 10.

*LESSON PLAN*

2. Job Aids

3. Action Plans

E. Activity 8.1—Decide on Your Methods

   1. Work individually
   2. Refer to the EMT-Basic lesson assigned for final presentations
   3. Determine the instructional methods that will best help students attain the lesson objectives

*ADDITIONAL INFORMATION*

2. Job aids

   Job aids are written guides for on-the-job use. They often come in the form of checklists, steps for a procedure, or visual identification aids. Participants may follow the job aids during a presentation, use them as part of an exercise, or have them handed out at the end of a course.

3. Action plans

   Action plans aid the transfer of learning by helping trainees to think through applying new skills or knowledge in a job situation. Action plans range from relatively simple forms that can be completed in a 15-minute exercise, to complex plans, developed by work teams that can take a half-day or whole-day session. Long-term action plans are completed during the course; participants commit to taking action within a specified period of time, say within a few months.

   A good follow-up to the long-term action plan: the instructor can have participants write a letter to themselves during class that details what they plan to do on-the-job with the information they're learning. Then in 3 to 6 months, the instructor has a stack of letters to mail to participants which will remind them to apply their new skills and gives them the opportunity to evaluate how well they've done that so far.

E. **Activity 8.1—Getting Started—Decide on Your Methods**

Students will determine the best fit instructional strategies, given the objectives and the evaluation plan they developed in Lesson 6 and 7. Encourage them to refer to the matrix of Instructional Methods included in Appendix B. If possible, recruit assistant instructors to help you give some one-on-one guidance to students during this activity.

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*INSTRUCTOR NOTES*

*LESSON PLAN*

## II. Instructor Skills

A. Preparation

B. Communication skills

1. Classroom settings and one-on-one interactions

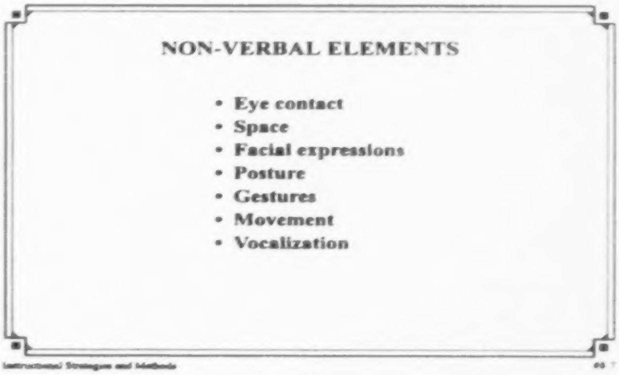
**Refer** to handout

Preparing To Teach handout, Appendix B.

2. Giving instructions

**Display** OH #8-7

3. Non-verbal elements of communication



NON-VERBAL ELEMENTS

- Eye contact
- Space
- Facial expressions
- Posture
- Gestures
- Movement
- Vocalization

Instructional Strategies and Methods

#8-7

*ADDITIONAL INFORMATION*

## II. Instructor Skills

In this section, you'll have an opportunity to practice and refine your instructor skills.

### A. Preparation

Preparation is critical to effective instruction. Review the content of a course thoroughly. If you have not taught a course before, allow yourself plenty of time to examine each lesson. If you have questions, get them answered. It is more difficult to train effectively when you are unfamiliar or uncomfortable with the material.

It also is helpful to understand the overall structure and organization of the course you are going to deliver; that is, to get the big picture as well as the details. Get an idea of how each section builds on and relates to the others, and how to best use the materials to achieve the course goals. More specifically, review the sequencing of lessons, note all of the activities, and make sure you have the necessary materials and supplies.

### B. Communication Skills

1. Classroom settings and one-on-one interactions

As instructors, we are most often faced with a room full of students. Sometimes, however, we are in settings that involve guided practice, individual tutoring, and other forms of one-on-one contact. We will discuss communication skills that are needed in both classroom settings and during one-on-one interactions.

2. Giving instructions

3. Non-verbal elements of communication

Non-verbal elements of communication have been found to influence perception and contribute to a feeling of trust even more than the spoken word. Gestures and facial expressions convey interest, sympathy, understanding or confusion, affirmation and agreement, or disapproval. Being aware of these non-verbal elements can help you to build trust and to establish rapport quickly.

*INSTRUCTOR NOTES*

**Ask** a question

How do you feel about a speaker who looks at the floor or who reads notes without looking up?

- No confidence
- Unprepared
- Afraid of audience
- Aloof

*LESSON PLAN*

a. Eye contact

(1) Speakers tend to use three kinds of eye contact

- Direct
- Scan
- Room thirds

## *ADDITIONAL INFORMATION*

a. Eye Contact

Maintain appropriate eye contact. Good eye contact helps to establish your credibility. It engages participant attention and interest. When you look directly at a student, s/he will feel that you are speaking to them personally. Eye contact helps you to "read" your audience; you can more accurately gauge interest level, comprehension, the time needed to complete an activity, and whether it's time for a break.

(1) Speakers tend to use three kinds of eye contact

- Direct

  The speaker focuses on one person for several seconds or for an entire sentence. This type of eye contact captures a participant's attention and gives you a chance to study them. Use direct eye contact with several participants around the room and draw in the whole audience.

- Scan

  The speaker makes eye contact with each person briefly and includes everyone. A scan gives you a quick "read" on the audience. This is particularly useful after your attention has been diverted to adjust a transparency or distribute materials.

- Room Thirds

  If you tend to focus on just a couple of people or one section of the room, it can be helpful to mentally divide the room into thirds and then deliberately make eye contact with participants in each section. This will help you to avoid the common mistake of making contact with only the friendliest, most interested faces. If you are nervous, it can help to make contact with the friendly faces. But, if you stick with those alone, you will lose the opportunity to draw in the rest of your participants.

*INSTRUCTOR NOTES*

**Ask** a question

Have any of you encountered a situation that was a direct result of a unique cultural perspective?

Ask everyone to stand up, feet apart, arms at sides. Have them shake their arms a bit if they're not relaxed. Remind them to think about their facial expression, too—it doesn't have to be sweet, just pleasant and interested.

*LESSON PLAN*

(2) Cultural differences in making eye contact

b. Space

c. Facial expressions

d. Posture

## ADDITIONAL INFORMATION

(2) Cultural differences in making eye contact

Be sensitive to unique cultural tendencies regarding eye contact. For example, some cultures consider direct eye contact while both speaking and listening to be a sign of interest. In other cultures it is considered more attentive to drop or avert the eyes while listening, showing earnest concentration.

b. Space

Space can relate to power. Be sensitive to perceptions; a large desk between you and your student may be seen as a barrier, while being too close may seem intimidating, particularly if you tower over your student. Be aware of space when you communicate and create an open, receptive, and non-threatening environment.

NOTE: There are cultural differences regarding space as well. "Personal space" is the distance we like to keep between ourselves and others. Except for intimates, we will feel invaded when "our space" is breached. Ranges for personal space tend to be larger for men than for women; and in certain cultures, the space requirement is minimal. The feeling of continually wanting to move away from or closer to the other is the likely result of this intercultural disparity.

c. Facial expressions

Facial expressions are perhaps the most powerful non-verbal element of communication. Be sure to give clear non-verbal signals, such as nodding your head in agreement, smiling your approval, or looking perplexed when you have a question. These expressions help to preserve the "give-and-take" dynamic of conversation which are necessary to shared understanding.

d. Posture

An "open" body posture is one in which your arms lay casually at your side, or rest on a surface. Leaning forward conveys an eagerness to hear the next word. The best stance for training is solid and comfortable. Feet are shoulder-width apart, arms at sides, expression relaxed with an open, friendly manner. With this body posture, you will look confident, in control, and ready. You'll also be able to move easily and use your arms to gesture.

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| **Ask** a question<br>When do we gesture in conversation? When we're:<br>■ Excited<br>■ Can't explain in words<br>■ Displaying something<br>■ Trying to make a point<br>What are some distracting things that speakers do? | e. Gestures |
| **Ask** a question<br>When do trainers move during training?<br>■ For emphasis<br>■ To use flipcharts, boards, and overheads<br>■ Check in with participants<br>■ During activities<br>Remind participants to use movement deliberately. It can have a powerful impact. | f. Movement |
| | g. Vocalization<br>■ Vary volume, pitch, speed, and tone<br>■ Pause naturally |

*ADDITIONAL INFORMATION*

e. Gestures

Another important part of non-verbal communication is gesturing. During a presentation, use gestures would feel natural in an exciting or important conversation. Gestures that you commonly use will be more comfortable for you and they won't appear artificial to your audience. However, remember that gestures need to be "bigger" than they are in normal conversation. Audiences have a difficult time seeing small or waist-level gestures and tend to interpret this type of movement as nervousness.

f. Movement

Avoid rocking or pacing; they will distract from your presentation. Take steps! Firm, purposeful movement will enhance your presentation.

Moving toward your audience has a powerful impact; use movement deliberately to emphasize important points.

g. Vocalization

- Vary volume, pitch, speed, tone

  Vary your volume, pitch, speed and tone. If you speak softly, imagine speaking to the back of the room. This will help you to project your voice; participants become frustrated when they cannot understand the speaker. Focus on WHAT you are saying and your voice will reflect your message.

- Pause naturally

  Pauses are a natural part of how we use our voices and should be used during your presentation. They are effective before beginning to focus a group's attention, to emphasize an important point, and to invite reflection. Pause after you ask a question or solicit input. Some trainees will need time to formulate a question or an answer. Do not assume silence means no one is going to respond. Count to ten (slowly) after you've asked for a response.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| **Ask** a question<br>Can you compare these types of responses to the types of feedback we discussed in Lesson 2? | 4. Confirming responses<br>▪ Direct acknowledgement<br>▪ Clarifying response<br>▪ Positive response<br>▪ Supportive response<br>▪ Constructive disagreement |

## *ADDITIONAL INFORMATION*

4. Confirming responses

During conversations, listen attentively. Use what are known as *confirming* responses. Confirmation involves acknowledging the other's communication by responding relevantly in such a way that accepts their experience, whether you agree with them or not. Confirming responses also suggest a willingness to become involved with the other person. Include both non-verbal and verbal elements. We'll discuss each type in detail.

- Direct acknowledgement—a confirming response that enables the speaker to know that what was said has been heard and understood. For example, "Yes, I understand what you mean."
- Clarifying responses ask for more information.
- Positive response—expressing your genuine positive reaction is appropriate and welcomed by the student.
- Supportive response—supportive responses demonstrate care and consideration for another's circumstances or point of view. This may include a declarative statement of intention to act on their behalf, or simply an empathetic word of encouragement.
- Constructive Disagreement

  Disagreement can occur between you and your students, but keep the focus on the content rather than the individual. Find something to agree with in the ideas, opinions, and beliefs of your student, even if it is merely to say that you share a concern about the issue. Refer to the section on *constructive feedback* in Lesson 2, Instructor Roles and Responsibilities.

*INSTRUCTOR NOTES* | *LESSON PLAN*

5. Disconfirmation
   - Irrelevant or tangential
   - Impersonal or impervious
   - Incongruent verbal and non-verbal messages
6. Activity 8.2—Active Listening Roleplay
   a. Form pairs
   b. Given scenario cards, roleplay active listening responses
   c. Obtain feedback from your partner

402

*ADDITIONAL INFORMATION*

5. Disconfirmation—a roadblock to communication which alienates the two communicators.

   - Irrelevant and tangential response

     One form of disconfirmation is a response that is irrelevant or tangential. These off-topic replies say, "What you are saying is not important; I want to talk about what matters to me." For example, when the little boy says to his mom, "Look, Mom. I found a snail" and the mother answers, "Go wash your hands."

   - Impersonal or impervious response

     Impersonal or impervious responses are also disconfirming; here the message is "You don't matter" or "I don't want to get too close to you." These can be cloaked in inappropriate humor; sarcastic comments are usually disconfirming.

   - Incongruent verbal and non-verbal messages

     Each of us "speaks" with a distinct body "language" just as surely as we speak with words. In fact, research indicates that when verbal and non-verbal messages appear to contradict one another, people tend to believe the non-verbal message is more accurate. This type of incongruency is disconfirming as well. For example, if you smile while you tell students that the class as a whole is doing very poorly, students will be perplexed.

6. Activity 8.2—Active Listening Roleplay

   Refer to Appendix A. The class should break into pairs and choose one person to play the student and one person to play the instructor. The "student" refers to the scenario cards to start the roleplay. The "instructor" applies the principles of active listening as they respond to their partners. This roleplay gives participants the opportunity to practice the three types of feedback discussed in Lesson 2 and to put to use the communication skills just discussed.

*INSTRUCTOR NOTES* *LESSON PLAN*

C. Questioning techniques

  1. Setting expectations

  2. Make your request clear

*ADDITIONAL INFORMATION*

## C. Questioning techniques

In a typical classroom, the instructor does most of the talking. This approach is not the most effective way to stimulate learning. The skillful use of questions will facilitate participation and create a more dynamic learning environment.

Encourage participants to ask questions; think of questioning as a window of opportunity for real learning to occur. If you have a quiet group, break the ice by asking for a show of hands in response to a simple question. This can get things moving.

1. Setting expectations

   Let the group know at the beginning of your presentation that you will be asking and accepting questions throughout the course presentation.

2. Make your request clear

   Make it clear what you are asking for. Do you want a list of items, a brief summary, a description, an example? Also, make your purpose clear; relate the question to the learning.

*INSTRUCTOR NOTES*

**Ask** a question

Can you think of any other reason to question your students?

*LESSON PLAN*

3. Purpose of questioning
    - a. Assessment
    - b. Drawing out participants—use notecards
    - c. Eliciting discussion or increasing accountability
    - d. Increase retention

*ADDITIONAL INFORMATION*

3. Purpose of questioning

a. Assessment

In this course, you will find that questions are often used to appraise the background knowledge of the group or to assess how well students are processing and applying the information that is being presented. A question is posed, the group provides answers, and the instructor documents them on the flipchart or board. The instructor then completes or fills in missing points. When using these types of questions it is important that the instructor screen the answers and only document on the flipchart those answers that are correct. Otherwise, the participants who are taking notes will write down incorrect information.

b. Drawing out participants—use of notecards

One very effective technique when dealing with a group who may be intimidated by the speaker, or when the material is particularly complex, is the use of note cards. pass out a 3x5 card at the beginning of the session (not the course) and ask everyone to write down one good question before the next break. Then, discuss the questions directly after the break.

c. Eliciting discussion or increasing accountability

It is also appropriate for instructors to direct questions to the participants. Questions directed to the group at large may elicit a good discussion; questioning an individual serves to increase accountability and therefore attention to course material.

d. Increasing retention

Research indicated that as learners make connections between new information and their own knowledge, retention increases. Some questions are more effective at generating the reflection, processing, and connections necessary o learning than are others. The two major categories are open- and close-ended questions. Open-ended questions solicit more feedback and interaction. Closed-ended questions are useful to control talkative participants and to bring closure to key points.

*INSTRUCTOR NOTES* | *LESSON PLAN*

4. Question and answer sessions
   a. Prepare—anticipate questions
   b. Prime the pump
   c. Keep to the point and be brief
   d. Don't worry if you don't know the answer

D. Use of humor

403

4. Question and answer sessions

Question and answer sessions allow you to address specific concerns of your group, to clarify your main points, and to learn from the audience.

a. Prepare—anticipate questions

Preparation will help you. Try to anticipate the kinds of questions your audience will ask as you go through the lesson plan. If you have trouble, ask someone who has taught the course before.

b. Prime the pump

During a question and answer session, let the group know what kinds of questions are appropriate. When you have opened the session up for questions, allow the group some time to come up with a questions. Try to become comfortable with a pause. If you still don't get a question, you may ask a question yourself. "I was wondering how this applied to your specific situations..."

c. Keep to the point and be brief

d. Don't worry if you don't know the answer

Do not worry if you don't know the answer. You can throw the question out to the audience and let them share their experience, offer to find the answer to the question (make sure you follow up if you do), or state that the question is outside of the scope of the presentation (if it is). Use active listening to clarify unclear questions. Break complex questions down into parts. If a question seems hostile, the best approach is to ignore the hostility and focus on the question. Deal with the hostility privately if it appears to be a problem.

**D. Use of humor**

Humor is important in training; it can add interest, reduce tension, and increase group identification. Humor should be both effective and appropriate. Humor should support the objectives of the course, not dominate the course or sidetrack the group. Humor is never the point, always a method. Humor should always be used appropriately. Be aware of, someone who could be hurt or offended by what you may be saying, or reflecting poorly on the EMS. Self-

*INSTRUCTOR NOTES*

**Conduct** activity

Refer students to Activity 8.3 in Appendix A. Go over the directions with them and encourage them to have fun with the presentations. Provide guidance to trainees individually as they prepare.

Have class members use the Mini-Presentation Checklist in Appendix B as they observe each presentation.

After each trainee completes his or her presentation, debrief them. Ask what they thought they did well and what they would like to work on for their final presentation. Then pass them the checklists so they can learn from the feedback of others.

*LESSON PLAN*

E. Activity 8.3—Mini-Presentations

1. Refer to Activity 8.3 in Appendix A and prepare individually
2. Use the Presentation Checklist in Appendix B as you observe each presentation
3. Relax and enjoy the practice

deprecating humor is generally the safest, although too much of it may injure your credibility with the group.

E. **Activity 8.3—Mini-Presentations**

Refer to Activity 8.3 in Appendix A for details about this exercise. Be sure to use the presentation evaluation forms to familiarize students with their use prior to the final presentations and allow practice in observation and scoring. This exercise should provide feedback to students about things they may want to work on and serve as an interim evaluation.

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*INSTRUCTOR NOTES*

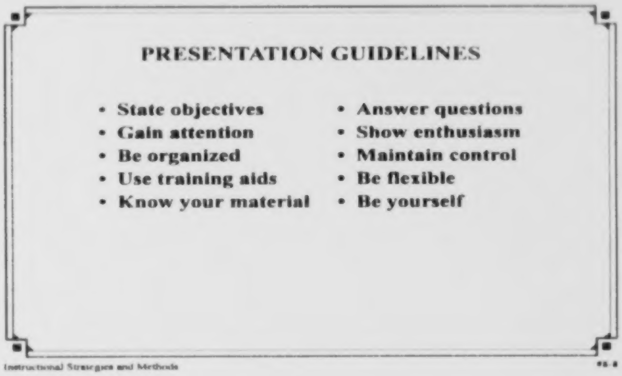
**Display** OH #8-8

Refer students to the Student Presentation Evaluation Form in Appendix B and note the similarity between the items and the points on the overhead transparency. Tell students that this form is the one that they will use to evaluate each others' final presentations.

*LESSON PLAN*

F. Facilitation

G. Presentation guidelines



### PRESENTATION GUIDELINES

- **State objectives**
- **Gain attention**
- **Be organized**
- **Use training aids**
- **Know your material**
- **Answer questions**
- **Show enthusiasm**
- **Maintain control**
- **Be flexible**
- **Be yourself**

Instructional Strategies and Methods

#8-8

*ADDITIONAL INFORMATION*

## F. Facilitation

Facilitation is the art of managing a process among participants. Facilitation is generally used during group discussions or processes to help the group work together to find solutions. Successful facilitation tries to make itself obsolete by providing groups with the skills to manage itself. Facilitation relies on active listening, close observation of group dynamics, and restraint. It can be tempting to jump in and solve a group's problem or point out where the group should be going. Good facilitators give groups room to test out ways of working together. Ground rules agreed on by the small group will help them to manage their own processes.

Refer to Lesson Two, Instructor Roles and Responsibilities, for more information about facilitation skills.

## G. Presentation Guidelines

1. State objectives

Let participants know what they should expect to get out of the instruction. Continue to reference these objectives throughout your presentation. This helps students to mentally organize the material you are presenting. It also increases student satisfaction when it becomes clear that the stated objectives were met.

2. Gain the student's attention

Many methods may be used to gain the student's attention, e.g., telling a relevant anecdote, posing a unique situation, or asking how they would solve a problem. Once you have gained their attention, you must then maintain it throughout the entire lesson. After about 15-20 minutes of presentation, it is essential that the student be reinvolved in the learning process. Use the various instructional methods described earlier in the lesson, such as questioning, brainstorming, or demonstration to keep students active in the learning process.

3. Be organized

Present material in a logical sequence, building from foundational concepts. Have the necessary materials at your fingertips.

413

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|

*ADDITIONAL INFORMATION*

4. Use training aids

People learn better when more than one sense is stimulated. By using pertinent, well-designed aids, comprehension and retention will be enhanced. In addition, multimedia materials add variety to the learning experience.

5. Know your material

This item is important. Your credibility and student attentiveness go hand in hand.

6. Answer questions

This has two parts. First, always respond to student questions, even if they seem irrelevant. Never ridicule. If a question appears to be out of scope, say something like, "Let's see how this relates to what we've been discussing." If a question is too broad or tangential to the discussion, it may have to be deferred. When you have responded to a question, make sure you were on target and complete.

The second part is the reality check. Get an accurate read on the effectiveness of your presentation by asking questions of the students. Direct questions to students at times. This forces participants to process the material and put it to use, and lets you evaluate individual comprehension. Give the student time to think through the question and come up with an response before you jump in and answer it yourself.

7. Show enthusiasm

Be enthusiastic about the material and enthusiastic in your delivery.

8. Maintain control

It is your responsibility to target objectives and keep the discussion on track.

9. Be flexible

Being well-prepared means you have an outline and follow it. However, the needs of your students may require flexibility in timing and instructional strategies.

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| | **III. Summary** |
| | **References** |

*ADDITIONAL INFORMATION*

10. Be yourself

You may admire certain speakers for their flair or competence. Don't try to imitate them; it doesn't work. Instead, try talking to students as if they were your neighbor or friend. This can help you to relax and make your delivery more effective.

## III. Summary

This lesson presented an overview of instructional strategies and methods, their advantages, disadvantages, when to use them, and how to use them. It also addresses instructor skills, such as effective communication, questioning, and presentations, and provides students the opportunity to practice those skills.

## References

Instructional Systems Design (ISD) Job Aids. The U.S. Office of Personnel Management, Developed by Human Technology, Inc., McLean, Virginia, July 1990

HUD Mentoring Program Train-the-Trainee Guide, Developed by ASA, April 1995

Understanding Instructional Systems Design, ASA, November, 1992

Glasgow, Z., Seels, B. (1990). Exercises in Instructional Design. Columbus: Merrill Publishing

Slavin, Robert E. "Research on Cooperative Learning: Consensus and Controversy," Educational Leadership: 52-54, December 1989-January 1990

Heinich, Molenda, and Russell (1993). Instructional Media. New York: MacMillan Publishing

**Instructional Strategies and Methods**
**bring about**
**the learning events**
**that will achieve the instructional objectives**

**The Learning Environment**
**is**
**the context**
**in which learning events take place**

# INTRODUCTION

- State the objectives
- Link objectives to performance
- Link new material to past learning

# EFFECTIVE PRESENTATIONS

- Logically ordered
- Divided into small chunks
- Use job-related examples
- Use visual aids
- Encourage interaction
- Call attention to key points

# EFFECTIVE PRACTICE

- Occurs frequently
- Requires active trainee involvement
- Includes corrective feedback to address errors
- Increases in difficulty from transitional practice to criterion practice

# EFFECTIVE FEEDBACK

- **Immediate**
- **Clear**
- **Accurate**
- **Solution-oriented**
- **Respectful**

# CATEGORIES OF METHODS

- Presentation Forms
- Discussion Forms
- Demonstration
- Simulation
- Cooperative Learning
- Problem Solving
- Tutorial

# NON-VERBAL ELEMENTS

- Eye contact
- Space
- Facial expressions
- Posture
- Gestures
- Movement
- Vocalization

# PRESENTATION GUIDELINES

- State objectives
- Gain attention
- Be organized
- Use training aids
- Know your material
- Answer questions
- Show enthusiasm
- Maintain control
- Be flexible
- Be yourself

# DESIGN AND USE OF MEDIA

## 9

Training Delivery Options ◂
Media Selection ◂
Principles of Design ◂
Teaching Aids—Prepared and Spontaneous ◂
Getting Started—Design Your Own Teaching Aids ◂

## *OVERVIEW*

**Suggested instructional time for this lesson:** 1.5 hours

### Introduction

This lesson presents different media options to incorporate into your lesson presentation. You will learn what media is available, how to select and design appropriate media, and be given information about different types of equipment.

### Lesson Objectives

Through group discussion, question and answer sessions, and small group activities, the EMS instructor trainee should be able to:

- List four steps in the media selection process
- List three purposes of media decisions
- Select appropriate media to achieve instructional objectives
- List five components of a lecture box or AV tool kit

### Materials Needed

- Overhead projector and screen
- Flipchart (prepared objectives)
- List of media resources
- Blank transparencies, markers
- Sample demonstration props, posters
- EMT-Basic Lesson

### Instructional Strategies

- Lecture
- Discussion
- Question and answer
- Visual Aids
- Demonstration (if needed)
- Practice (if needed)

### Audiovisual Equipment (optional)

- Slide projector/slides
- Film projector/film
- Laser pointer
- LCD Display panel
- TV/VCR and videotape
- Video camcorder
- Audiocassette player/tape
- Computer generated projection equipment/demo

*This audiovisual equipment is optional and should be provided and/or demonstrated depending availability and the needs of the students.*

*INSTRUCTOR NOTES*

**Go over the objectives**, using a flipchart prepared before class. Then post the page visibly in the room.

**Display** OH #9-1

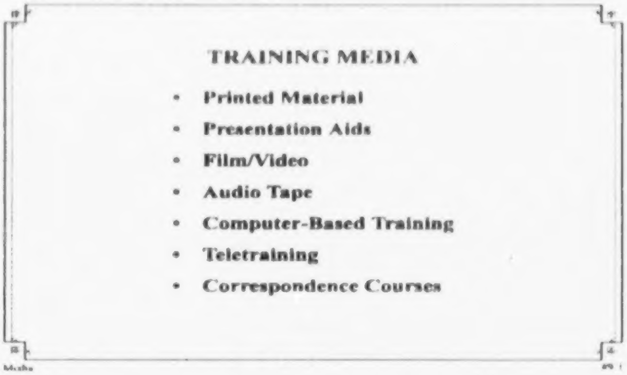
This section is intended to be a quick overview of the many training delivery options available today.

Encourage students to read the Additional Information provided for more in-depth coverage of the topic.

*LESSON PLAN*

## Lesson Objectives

## I. Training Delivery Options



TRAINING MEDIA

- Printed Material
- Presentation Aids
- Film/Video
- Audio Tape
- Computer-Based Training
- Teletraining
- Correspondence Courses

Media

#9-1

436

*ADDITIONAL INFORMATION*

## I. Training Delivery Options

One of the most interesting and challenging decisions in the instructional design process is the selection of the medium or media to use to deliver the instruction. Over the last ten years, the options for media used for training purposes has increased significantly. A variety of high-end, technology-based training media are available. However, "high-tech" does not mean better. Appropriate media are determined by a number of factors which must all be considered for "best fit" solutions.

**Classroom instruction** (instructor-led) is comprised of standard instructional techniques, such as lecture and slide presentations, which can be enhanced by employing some of the instructional strategies you learned about in Lesson Eight. The primary advantage of instructor-led training is face-to-face interaction. Disadvantages include travel costs to delivery sites, accessibility to a far-flung student population, and course standardization. Standardization is affected primarily by differences in individual teaching styles and experience levels.

**Teletraining** is delivered as a video broadcast to remote locations via satellite. Basic teletraining involves transmitting a presentation, either live or taped, to remote locations with one-way audio and video. Student responses are typically mailed. Teletraining systems are becoming more sophisticated and increasingly simulate a regular classroom environment. Instructors are viewed on large screen televisions, and two-way audio (each student has a microphone) is common. Hand-held devices allow students to input simple responses, or to signal a desire to ask a question or provide a comment. Sometimes instructors will hold on-line office hours or, by using Bulletin Board Service (BBS), instructors can post questions and hold on-line discussion groups.

**Computer-Based Training (CBT)** provides self-paced, individualized training using a computer to deliver the instruction. CBT can be designed to accommodate students of varying experience levels. Although substantial development costs are typical, CBT provides standardized instruction that proves cost-effective when used repeatedly by large numbers of students in many locations. Another computer-based training option involves fully equipped learning resource centers, which enable instructors to present material to students seated at workstations around the room via a networked client-server system. Depending upon the design, students can work

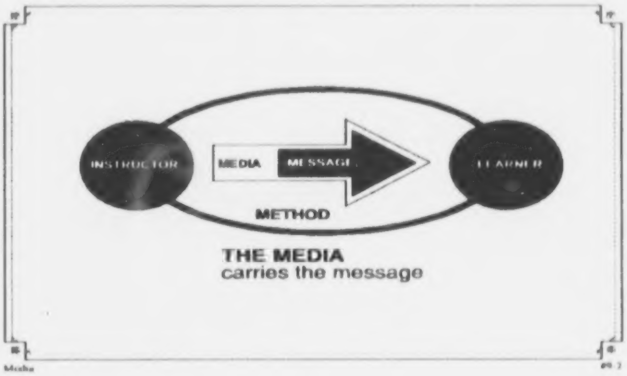
# MEDIA

*INSTRUCTOR NOTES* | *LESSON PLAN*

**Display** OH #9-2

## II. Media Selection

A. Media, Methods, and the Message

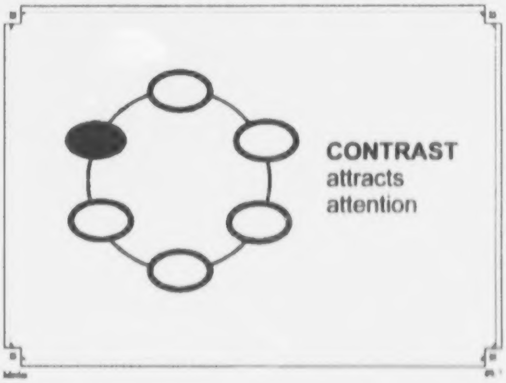

INSTRUCTOR
MEDIA
MESSAGE
LEARNER
METHOD

**THE MEDIA**
carries the message

**Display** OH #9-3

B. The purpose of media decisions

1. Emphasize



**CONTRAST**
attracts
attention

individually or as a group, using the networked system. This is used most often in training on computer software.

**Correspondence courses** also provide self-paced instruction. Correspondence courses are typically paper-based but can include CBT and video components. If students have questions, there is generally an instructor or designated subject matter expert who can be reached via telephone or mail. Correspondence courses are excellent for teaching students in remote areas. However, students do not have the advantage of face-to-face time with the instructor or sharing knowledge with other students.

## II. Media Selection

### A. Media, Methods, and the Message

The word media is derived from a Latin word meaning "between" and refers to anything that carries information between a source and a receiver—for our purposes, the instructor and the student. We're differentiating here between the media that carry the message, the message itself, and the methods used. The message is the course content. The instructional methods are the context in which the message is communicated—those processes that the instructor selects to help learners achieve the course objectives.

Instructional media are selected to help students understand the message. They facilitate communication by making the content more easily understood.

### B. The purpose of media decisions

1. Emphasize

A primary concern of the instructor should be to ensure that visual cues guide students to important concepts and make essential material stand out. This can be accomplished through the use of headings, wide left margins with limited text, boldfaced headings, italics, and larger typeface. A tip: underlining text is not recommended; it has little impact on retention and interferes with the student's own processing and categorizing of the information. Emphasize important ideas; don't force the reader to search for key points. Refrain from using capitals to highlight because they are difficult to read; capitals can be used effectively in short headings.

# MEDIA

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| ***NOTE:*** Provide EMS or service-specific examples of a variety of media, such as posters, handouts, checklists, slides, and overheads. Use these examples throughout the lesson to illustrate how media can emphasize, organize, and clarify.<br>For example, a bottle of poison with a skull/crossbones or the crossed-out circle symbol and the word "WARNING" in red could be used to demonstrate how to emphasize important points with a picture and the use of color.<br>Or, display the instructor guide and show the use of pictorial icons to cue instructor actions. | 2. Organize<br>3. Clarify |

440

## *ADDITIONAL INFORMATION*

2. Organize

Use visuals to present material in an organized manner to students. Provide diagrams and flow charts of sequential steps if appropriate. Research indicates that adult learners benefit from an exercise in which they are given printed material and then are asked to generate their own "graphic organizer." This could be a simple outline, labelled clusters of circles, flow charts, graphs, etc.

Effective organization of material is essential to learning. Material should be reviewed to determine if there is a clear focus to each section. In terms of writing style, start all sections with an introduction, and all paragraphs with a topic sentence. Label text so that readers can locate the information they need.

3. Clarify

A prime instructional objective is clarity; it is the cornerstone of understanding. The media you choose should clarify difficult concepts. For example, the use of a pig heart dissection when discussing the cardiovascular system clarifies concepts that may be difficult to understand with words alone. Remember back to the "apple" exercise in Lesson 4. Symbolic representations of concepts, such as words, are not as effective at getting the point across as the real thing.

To be sure that your teaching aids aren't confusing, follow these rules:

- Keep your writing style simple
- Provide ample white space
- Highlight important ideas with color, boldface, or italics
- Use a typeface that is easily read
- Eliminate hyphens
- When using technical terms, include definitions
- Always spell out acronyms on first use, and again for new sections

*INSTRUCTOR NOTES*

**Ask** a question

What are other considerations when determining the best media to use?

*LESSON PLAN*

C. Factors that affect media decisions

1. Resources of the training site
2. Expertise and production capabilities
3. Flexibility, durability, and convenience
4. Cost effectiveness

*ADDITIONAL INFORMATION*

### C. Factors affecting media decisions

Practical considerations will always be a factor in media selection.

1. Resources of the training site

An important factor in media selection is the projected availability of various media in the environment in which the instructional package will be used. If the materials will be used in the learning resource center of a public school, community college, or university, then a whole array of media devices will probably be available. However, if the package is designed for home study or use in a community center where this equipment is not likely to be available, then you must either find a way to make the equipment available or limit yourself to paper-and-pencil types of instructional materials.

2. Expertise and production capabilities

The ability to manage the media which you incorporate in the instructional package is also a concern. There is a "learning curve" that must be factored in if you choose unfamiliar equipment. The ease and costs of production are also factors.

3. Flexibility, durability, and convenience

The flexibility, durability, and convenience of the materials are other factors. Is the equipment found only in a learning center, and is there a learning center available? Is it open during hours when students can use it for independent study? Are the materials and equipment transportable?

4. Cost effectiveness

Another factor is cost effectiveness. This should be evaluated over the term of expected use, for one medium compared to others. Some materials may be initially more expensive to produce in one medium than another, but these costs may be equalized when you consider how the costs will be amortized over a large number of students or a long period of time. It might be cheaper to videotape a presentation for a large group of students to view again and again as needed, which frees the instructor to work with small groups of students or to help individuals solve problems.

*INSTRUCTOR NOTES*

**Display** OH #9-4

Show examples of design elements applied to text such as boldface, type style, italics, size, and the use of color.

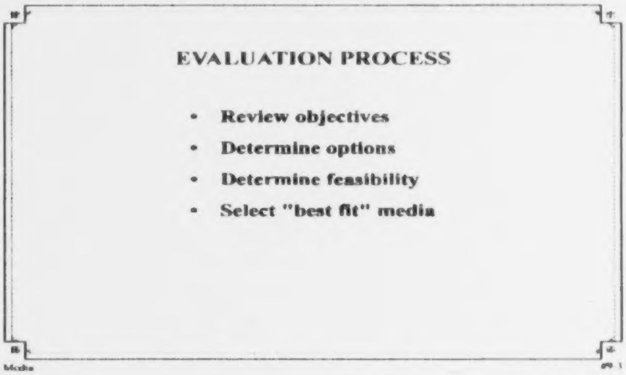
**Ask** a question

What impact do these design elements have on learning?

- Highlight key points
- Clarify confusing concepts
- Enhance retention
- Organize material

*LESSON PLAN*

D. The media selection process



**EVALUATION PROCESS**

- **Review objectives**
- **Determine options**
- **Determine feasibility**
- **Select "best fit" media**

Media

## III. Media Design

A. What are design elements?

1. Definition

2. Instructional value

441

**D. The media selection process**

The media selection process should be rooted in the course objectives. Some media are more effective for teaching cognitive objectives while others are more effective for psychomotor skills. Consider the targeted learning domain, the methods of instruction, and what media will best help learners to understand the course content.

## III. Media Design

Message development and design entails creating and combining design elements in a pleasing, understandable manner in order to capture interest and convey information effectively.

### A. What are design elements?

1. Definition

The use of *design elements,* such as boldface and italics, can increase the impact and instructional value of words. Font selection, size, and color—those things that affect the appearance of text—are all examples of visual design elements.

2. Instructional value

The instructional value of visuals, in the form of photographs and slides, graphics such as pie- or flow- charts, cartoons, and design elements such as lines, boxes, shapes, highlighting, and the use of color has been extensively investigated.

These visual "cues" have proven effective in grabbing the learner's attention, helping he or she to process information and understand it, and increasing what is remembered of the content. In order to develop messages that communicate effectively, instructors must deal with both the message itself and the design elements that, if properly applied, can increase learning.

Research related to learning from visuals indicates that relevant pictures or drawings help learners to understand and recall the content of verbal delivery or printed text. For example, graphics, pictures, or drawings presented prior

# MEDIA

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| Emphasize to the Instructor Trainees that all teaching aids should be reviewed prior to class to determine if they are legible, consistent, and directly relevant to the presentation.<br>Don't get hung up on these concepts. Have students read the Additional Information outside of class, and then get on with the business of hands-on production of supporting media for the Final Presentations.<br>Students may need guidance in how to obtain or produce the media that they need. They may also need practice in the use of media. | B. What factors should be considered in media design?<br>1. Legibility |

to instruction, known as advanced organizers, provide a context for the information that follows. This helps learners to organize information and thus aids cognitive processing.

Visual aids play an important role in studying specific subject matter, for example, the medical diagrams that are so much a part of EMS instruction. Visual aids promote learning by providing a visual representation of the system with labelled components, versus a text-only description of the material.

As an instructor, use as many visual representations as are appropriate. If the image helps to convey the message better, use it.

### B. What factors should be considered in media design?

Three important factors to consider when evaluating or creating media are legibility, consistency, and relevance. These factors should then be evaluated in the light of the overall purposes to be accomplished, e.g., to organize, clarify, or emphasize particular content.

1. Legibility

As stated, media is used to clarify content. This is only possible if the material is easy to read. Different things affect legibility, such as color, size, and complexity.

**Color.** The following color combinations are listed in descending order of legibility: Black on yellow; green, red, or blue on white (clear film); white (clear film) on blue; black on white (clear film); yellow on black.

There is a physiological reason for differences in perception based on color that have to do with how colors are focused in the human eye. Warm colors, such as red and yellow, seem to approach the viewer, while cooler colors, such as blue and green, recede. Instructors can capitalize on this tendency by highlighting important points in red and orange.

**Size.** The size of the letters used should be easily read when used as intended. For example, billboards use very large text, because they are meant to be read by the passengers of cars whizzing by at 65 miles per hour.

*INSTRUCTOR NOTES*

**Ask** a question

Does anyone have any questions about what we've discussed so far?

Relate consistency to the principle of unity discussed in the next section. The consistent use of certain visual cues helps learners to make sense out of complex subjects. Furthermore, if you show a training film, the message should be consistent with your presentation.

*LESSON PLAN*

2. Consistency
3. Relevance

## ADDITIONAL INFORMATION

Likewise, transparencies are often meant to be read from the back of a large lecture hall. Be sure that the text is large enough to be read easily.

**Amount of material.** The amount of material should fit the media selected. A textbook page, designed to be read, can have fairly small print and a variety of fonts. However, for overheads, meant to be projected in a darkened room to a group of students, a good guideline is 7 lines of text in a clear, easy to read type style. Posters designed to be mounted on the wall and read at leisure can include diagrams with a great deal of detail. Motivational posters, on the other hand, should have a limited amount of text with eye-catching pictorial or graphic elements.

2. Consistency

Consistency ties related elements into a coherent whole, thus creating unity and balance. If you use boldface headings in one section, continue the practice throughout, so the reader will be able to predict the significance of the visual cue. Additionally, supporting media should be consistent with primary course materials. Instructors should determine if there are any inconsistencies and be prepared to address them.

3. Relevance

The principle of relevance has to do with making sure that supporting media specifically pertain to course content. Instructors should review materials, such as videos, and evaluate the content in terms of lesson objectives. The *significance* of the content presented via supporting media should always be a consideration. Use supporting media deliberately, to emphasize key points.

**Ask** a question

What design elements are used in these instructional materials that apply the principle of unity?

- Consistent header, set apart in a gray box
- Consistent use of boldface and larger type
- Page numbering

**Display** OH #9-5

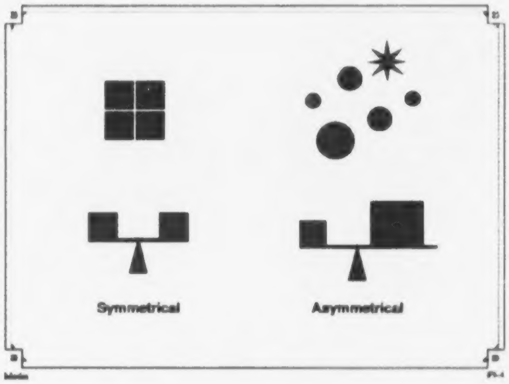
In addition to the overhead, show an example of a service-specific poster, overhead, or slide that shows a balanced design. For example, a front and back view of a skeleton is an example of a formal, symmetrical, balanced design.

Many posters use an asymmetrical, or informal balance. This is because this arrangement is often more visually dynamic.

## C. Principles of Design

1. Unity

2. Balance



*ADDITIONAL INFORMATION*

## C. Principles of Design

### 1. Unity

Unity is achieved by using related or repeated themes, colors, shapes, and types and formats of graphic elements, such as lines and boxes.

Eliminate nonessentials; do not clutter your design with extraneous information, whether verbal or visual. When developing your message, organize the information into distinct categories with a clear focus, so that you communicate only one idea at a time.

### 2. Balance

Balance describes the pattern of the elements in the visual. It engenders a psychological sense of equilibrium. The "weight" of the elements should be distributed equally on each side of an axis, vertical and horizontal.

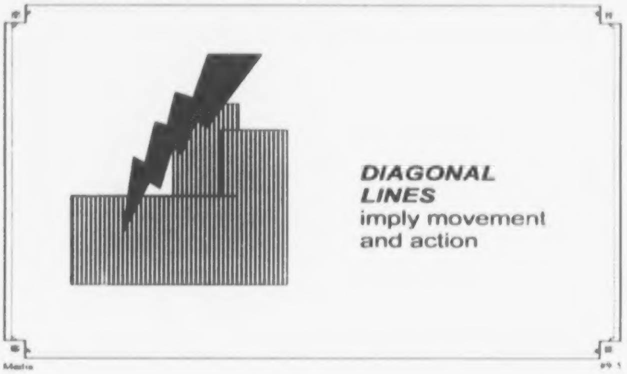
Balance can be achieved with symmetrical or asymmetrical arrangements. In most cases an informal, asymmetrical arrangement is more interesting and dynamic, and is especially suitable for posters and graphics. Aim for a rough equivalence of weight, but use diverse elements. For example, one large open square on one side, three dark circles on the other. Predictable patterns, such as regular geometric shapes, provide a convenient framework for screen design, as do arrangements that approximate certain letters of the alphabet, such as C, O, T, and S.

*INSTRUCTOR NOTES*

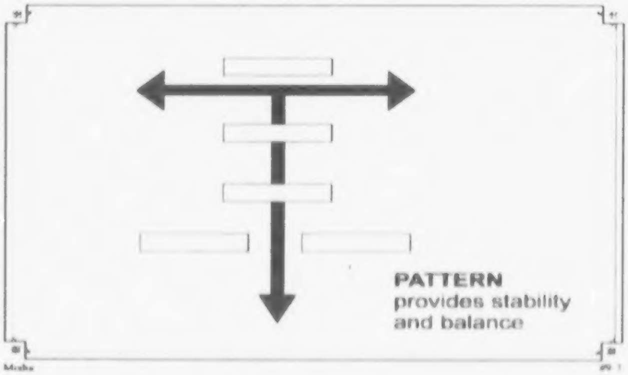
**Display** OH #9-6 and #9-7

*LESSON PLAN*

3. Perceptual impact of different designs



***DIAGONAL LINES***
imply movement
and action



**PATTERN**
provides stability
and balance

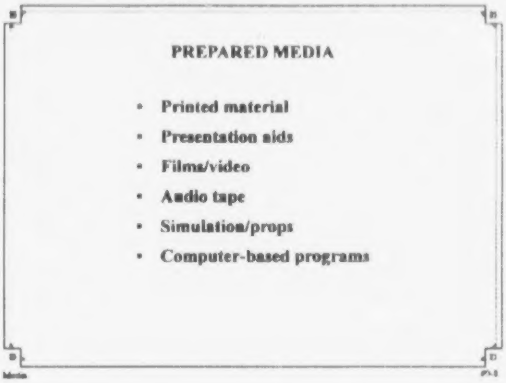
## *ADDITIONAL INFORMATION*

3. Perceptual impact of different designs

The perceptual impact of pictures, colors, etc., is considerable. Be sure that the impact is consistent with your message. For example, if you are attempting to attract volunteers to a fund-raising barbecue, bright colors, fun graphics, and bold text correspond with the message. However, if you are encouraging employees to take part in a stress reduction workshop, a more formal, symmetrical arrangement and soothing colors will impart a sense of serene tranquility.

453

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
|  | IV. Teaching Aids |
|  | A. Prepared vs. spontaneous |
| **Display** OH #9-8 | B. Prepared Media |



PREPARED MEDIA

- Printed material
- Presentation aids
- Films/video
- Audio tape
- Simulation/props
- Computer-based programs

Media

9-8

***NOTE:*** This is a quick overview of prepared teaching aids. If possible, have students read reference 9-1 before class so that you can focus on preparation, practice, and student questions/concerns.

**Ask** a question

Does everyone know about EMS media sources?

- Textbooks (Brady, Mosby, Saunders)
- American Heart Association
- Red Cross
- Local sources

*ADDITIONAL INFORMATION*

## IV. Teaching Aids

### A. Prepared vs. spontaneous

Some media are prepared completely prior to class; others are created as part of a discussion or activity. Prepared media necessarily have static content until updated outside of class. With spontaneous media, the instructor will have specific content in mind, but the process is flexible and creative.

### B. Prepared Media

Prepared media offer the advantages of allowing time for preparation in advance of presentation and the ability to target specific content. Development time allows the instructor to create polished, complex materials that reflect exactly those points he/she considers vital.

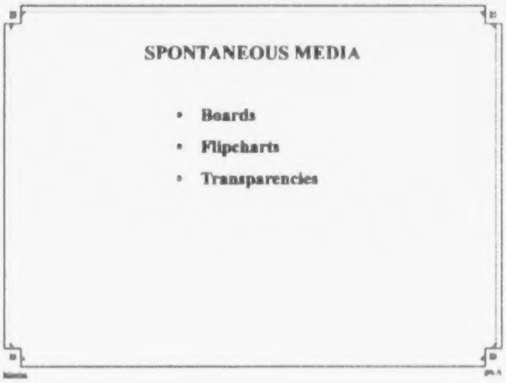
Refer to reference 9-1, Training Media, in Appendix B, for in-depth information about a variety of prepared media.

*INSTRUCTOR NOTES* | *LESSON PLAN*

C. Spontaneous Media

1. Overview

**Display** OH #9-9



SPONTANEOUS MEDIA

- Boards
- Flipcharts
- Transparencies

**Ask** a question

What instructional purposes are accomplished through spontaneous creation?

- Student input
- Increased investment
- Sense of directing outcomes

## C. Spontaneous Media

### 1. Overview

Interactive creation, or the process in which an instructor solicits input from students while employing an instructional aid, is valuable for a number a reasons. First, the students become invested; their thoughts are being incorporated into the product. They have a sense of directing outcomes; this is particularly attractive to adult learners. Spontaneous creation works well when a variety of subjective interpretations are possible, or when the applications are endless. Still, instructors should keep in mind that interactive creation *should be* directed by course objectives. You should be prepared to complete the process by filling in specific points, or by guiding the discussion so that all significant elements are addressed. We will discuss three basic types of spontaneous media.

**Boards.** Both traditional chalkboards and "whiteboards," which are used with special erasable markers (adds color), offer large work spaces for creating diagrams, outlining major concepts, flowcharting processes, or in other ways reinforcing lecture material. Instructors have the option of distributing printed handouts, but the immediacy and movement of spontaneous creation adds energy to a class discussion. Information can be left up to the class while other aids, such as transparencies, are being used to develop other points. This allows students time to absorb and record material.

**Flipcharts.** Flipcharts do not allow as much space as boards, but they do have the advantage of creating a permanent record. Pages can be saved and used later, perhaps in a group activity to further develop concepts, or they can be displayed around the room to continually reinforce key ideas. They are transportable. To ensure everyone can see the flipcharts, this medium is best used in groups of no more than twenty to thirty.

**Transparencies.** Transparencies can be used to record student input in much the same way as a flipchart. They are usually easy for everyone to see.

Practice using a variety of spontaneous media in your classroom instruction. This keeps interest and involvement high.

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| **Conduct** activity<br>Customize this activity to meet the needs of your students. | D. Activity 9.1—Create Your Own Media<br>1. In-class preparation time<br>2. Additional preparation<br>3. Demonstration and practice |

## ADDITIONAL INFORMATION

### D. Activity 9.1—Create Your Own Media

1. In-class preparation time

Have the class divide into groups of three. Using the EMT-Basic lessons, group members will help each other in the creation of teaching aids to support lesson content. Encourage diversity, creativity, and valid application of learning theory, etc.

**Develop your message.** Have each individual write down the key information or skills that must be communicated.

**Discuss with your peers.** Obtain feedback from the group. Often brainstorming can generate unique and creative design concepts.

**Layout design.** Each student should develop one piece of supporting media each, such as an overhead, chart, poster, or checklist. Instruct them to present a draft to the group members. Encourage positive and corrective feedback.

2. Additional preparation

Students must create or acquire supplemental media in presentation form for their assigned EMT-Basic lesson. Provide media resource information, supplies, and in-class work time as needed.

3. Demonstration and practice

Media that is cumbersome to use, or that is used ineptly, distracts from learning. Instructor Trainees should become comfortable operating equipment and practice writing on boards and flipcharts prior to their presentations. They should try operating equipment prior to class and make sure transparencies are labelled clearly and stacked in order.

*INSTRUCTOR NOTES*

**Display** OH #9-10

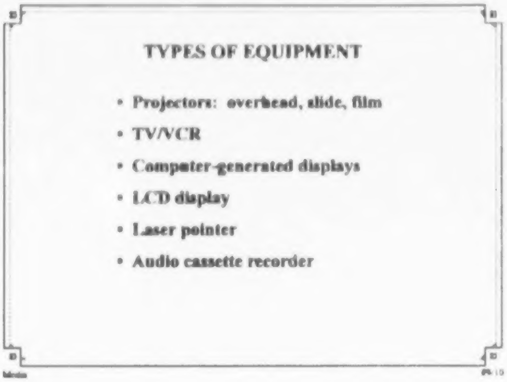
The amount of equipment demonstration and student practice required will depend entirely upon the students' experience, which is likely to vary within the group. It may be more convenient to arrange for an additional practical session, or perhaps the media resource center can give demonstrations, depending upon the institution.

Wrap this section up with an overview of how to get ready to teach.

*LESSON PLAN*

## V. Equipment

A. Types



**TYPES OF EQUIPMENT**

- **Projectors: overhead, slide, film**
- **TV/VCR**
- **Computer-generated displays**
- **LCD display**
- **Laser pointer**
- **Audio cassette recorder**

Media

#9-10

B. Getting ready to teach

1. Put Together a "Lecture Box"

*ADDITIONAL INFORMATION*

## V. Equipment

### A. Types

- Projectors: Overhead, Slide, Film, sample media
- TV/VCR, sample videotape
- Audio Cassette Recorder, sample educational audiotape
- Computer-generated projection equipment and demo disk
- LCD Display, sample graphic
- Laser Pointer

The focus of the equipment portion of the Media lesson should involve preparations for the Final Presentations. Students who are unfamiliar with the equipment they will be using should be given a demonstration and an opportunity to practice.

If time limitations allow, provide a demonstration of the newer technologies, such as computer-based instruction/presentation equipment. These innovations are becoming more readily available and may be of interest.

### B. Getting ready to teach

1. Put together a "Lecture Box"

Whether teaching locally or at a distant site, it pays to have the materials and equipment you will need when lecturing organized in one convenient place, ready to go, in easily transportable storage. Ideal for this purpose is a hard plastic box with a handle, such as those designed to hold hanging files. These are available at office supply stores, and although large enough to hold all of the materials suggested here, they still qualify as carry-on luggage on airplanes.

Include speaker's notes and any handouts or references for the class. Suggestion: keep notes in a 1/2 inch three-ring binder to prevent disarray if dropped. Any information about the lecture location, contact names and phone numbers, course flyers and directions can be placed into a labeled hanging file folder. A carousel of slides (two will fit if some other items are eliminated) is a necessary addition for many presentations. It is a good idea to include a mini slide viewer for a last minute check of slides prior to class.

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| | 2. General media supplies |

## VI. Summary

## References

## *ADDITIONAL INFORMATION*

One frequent lecturer, the source of the "Lecture Box" concept, suggests including hemostats to separate stuck slides.

You might consider including a kitchen timer to place on the lectern to keep track of time, and a small, battery-operated reading light for unlit lecterns. A handheld tape recorder allows you to tape your lecture and review it later for self-evaluation. Listening to the tape would be a good way to prepare when lecturing again on the same subject. Be sure to include batteries for all equipment, and spare light bulbs (for overhead projector). Finally, a retractable pointer (or laser pointer if you have one) is indispensable.

In addition to the items suggested above, it is a good idea to be prepared for any eventuality when using a variety of media. For an AV Tool Kit, include a heavy-duty extension cord and a small case of tools. Screen cleaner and lint-free wipes come in handy.

2. General media supplies

Here are some additional items to have on hand:

- Chalk and colored markers
- Whiteboard markers, a board cleaner, and cloths
- Thumb tacks, tape (for attaching flipchart pages to the walls)
- Batteries
- Light bulbs

## VI. Summary

This lesson presented the types of media available, how to select and design media, and how to use various types of equipment. Media is a valuable tool. It provides variety to your presentation, and helps keep students "tuned in."

## ADDITIONAL INFORMATION

### References

Reiser, R.A. and Gagne, R.M. Selecting media for instruction. Englewood Cliffs, N.J.: Educational Technology Publications, 1983

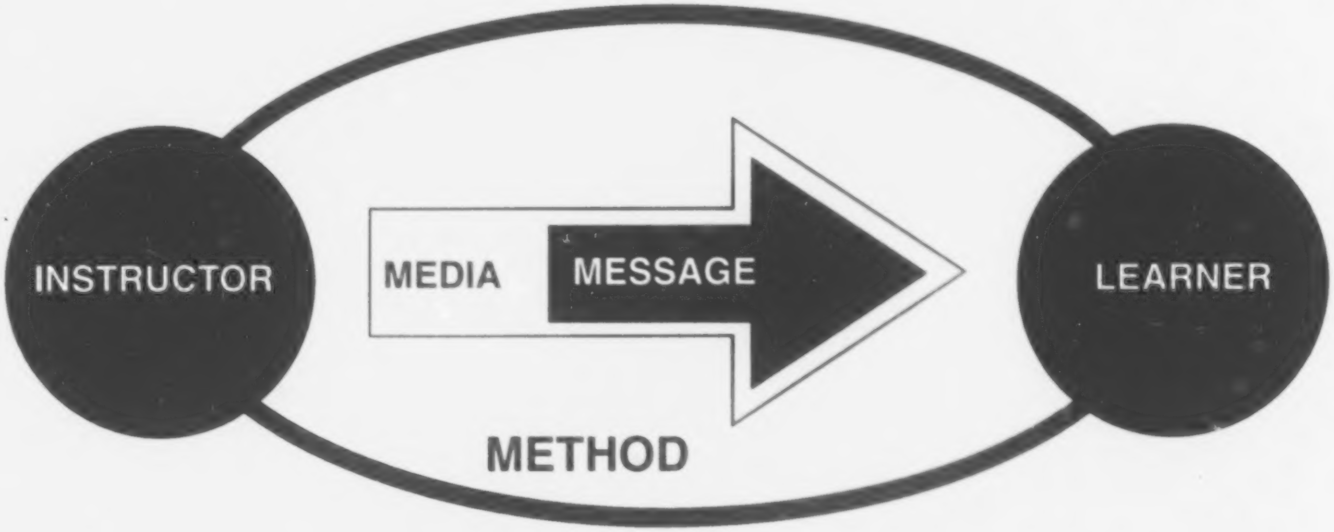
Anderson, R.H. Selecting and developing media for instruction. New York, N.Y.: American Society for Training Development, 1976

Heinrich, R., Molenda, M., Russell, J.D. Instructional media and the new technologies in education. New York, N.Y.: John Wiley, 1985.

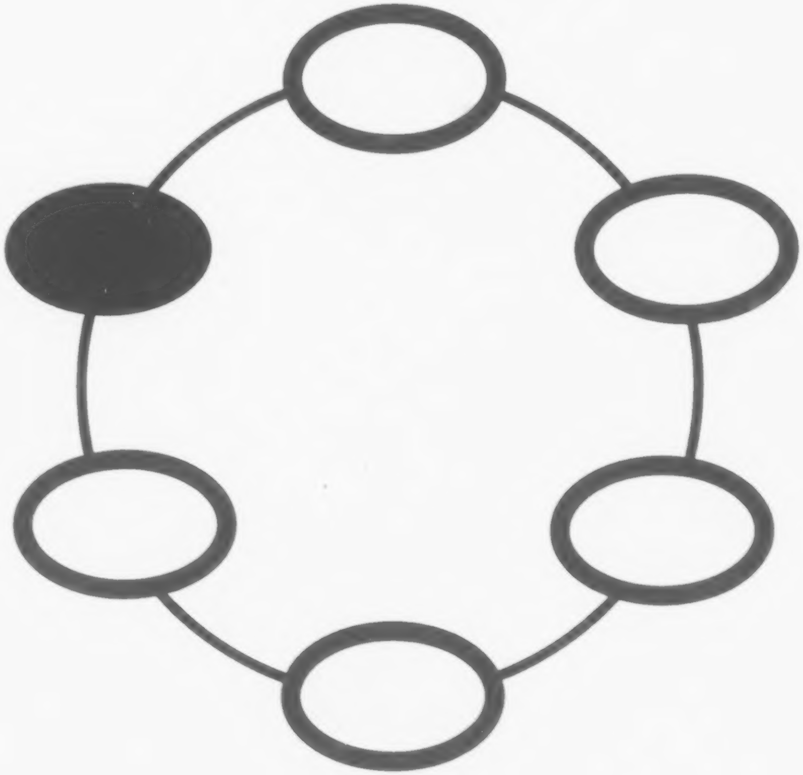
461

# TRAINING MEDIA

- Printed Material
- Presentation Aids
- Film/Video
- Audio Tape
- Computer-Based Training
- Teletraining
- Correspondence Courses


INSTRUCTOR
MEDIA
MESSAGE
LEARNER
METHOD

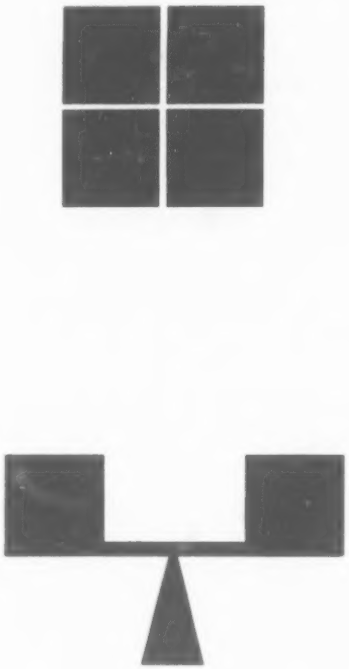
**THE MEDIA**
carries the message



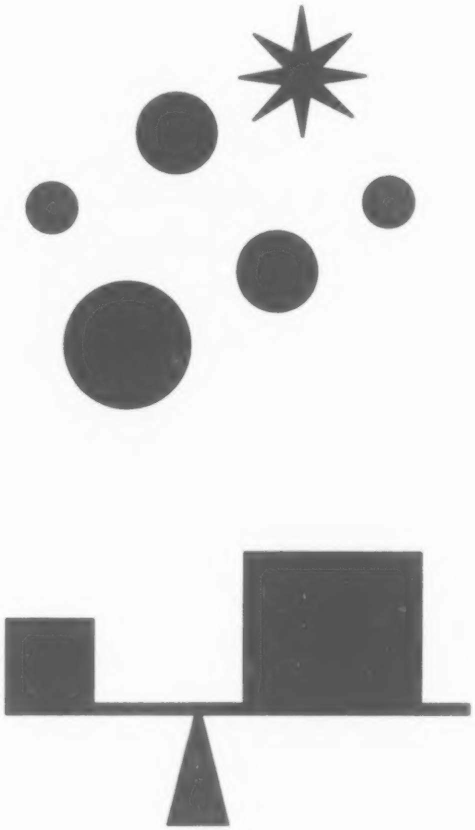
**CONTRAST**
attracts
attention

# EVALUATION PROCESS

- Review objectives
- Determine options
- Determine feasibility
- Select "best fit" media



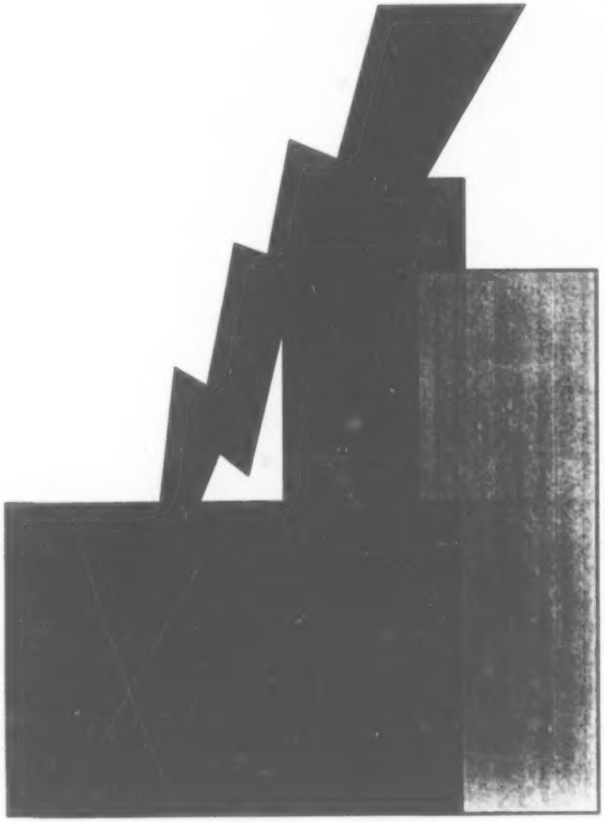
**Symmetrical**



**Asymmetrical**

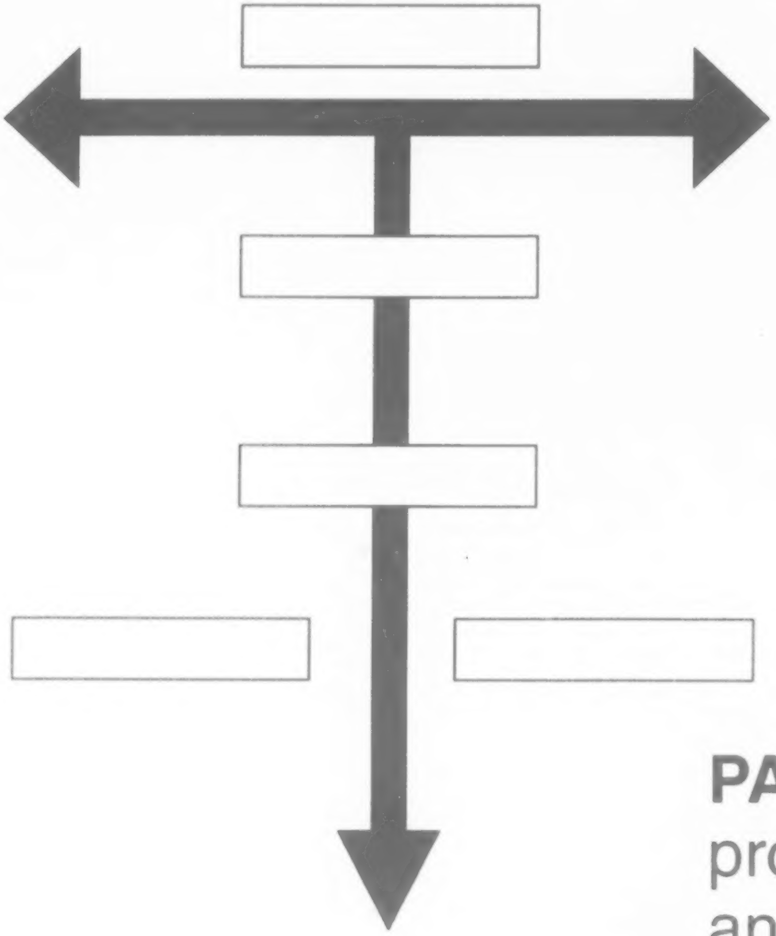
474

473



## *DIAGONAL LINES*

imply movement and action



**PATTERN**
provides stability
and balance

# PREPARED MEDIA

- Printed material
- Presentation aids
- Films/video
- Audio tape
- Simulation/props
- Computer-based programs

# SPONTANEOUS MEDIA

- **Boards**
- **Flipcharts**
- **Transparencies**

# TYPES OF EQUIPMENT

- **Projectors: overhead, slide, film**
- **TV/VCR**
- **Computer-generated displays**
- **LCD display**
- **Laser pointer**
- **Audio cassette recorder**

# LESSON PLAN DEVELOPMENT

## 10

Overview ◂
Components ◂
Examples of Lesson Plans ◂
Getting Started—Develop Your Own Lesson Plan ◂

# LESSON PLAN DEVELOPMENT

## *OVERVIEW*

**Suggested instructional time for this lesson:** 2 hours

### Introduction

As an EMS Instructor, you will teach courses that use different styles of lesson plans. It is important that you are familiar with the variety of lesson plans that you may encounter, and that you recognize the basic components of an effective lesson plan.

### Lesson Objectives

Through group discussion and question and answer sessions, the EMS instructor trainee should be able to:

- State the purpose of lesson plans
- Identify the seven major components of a lesson plan
- Describe the importance of each lesson plan component
- Incorporate the seven major components of a lesson plan when adapting or creating an individual lesson plan from the EMT-Basic curriculum.

### Materials Needed

- Overhead projector and screen
- Flipchart and markers
- Appendix B
- Development materials identified in previous lessons

### Instructional Strategies

- Lecture
- Discussion
- Question and answer
- Visual aids
- Individual activity

# LESSON PLAN DEVELOPMENT

*INSTRUCTOR NOTES*

**Go over objectives**, using a flipchart prepared class. Then, post the objectives visibly in the room.

**Display** OH #10-1

Ask participants for their definitions of a lesson plan.

**Refer** to handout

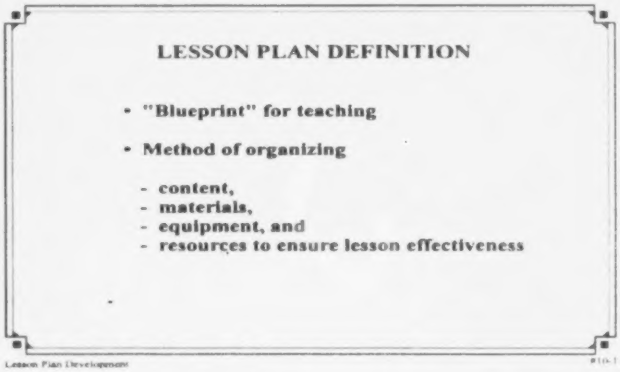
Ask students to take the Sample Lessons out of Appendix B; we will refer to them throughout this lesson.

*LESSON PLAN*

## Lesson Objectives

## I. Lesson Plan Overview

A. Definition



**LESSON PLAN DEFINITION**

- **"Blueprint" for teaching**
- **Method of organizing**
  - **content,**
  - **materials,**
  - **equipment, and**
  - **resources to ensure lesson effectiveness**

Lesson Plan Development #10-1

B. Types

- Scripted
- Outline

C. Examples

## ADDITIONAL INFORMATION

## I. Lesson Plan Overview

### A. Definition

A lesson plan is the "blueprint" for teaching a lesson. It is a method of organizing content, materials, equipment, and resources in such a manner as to ensure the outcome of training.

### B. Types

The lesson plans that you will work with in courses provided by NHTSA range from those that are fully scripted, i.e., all the detailed text is provided, to those that are only outlines of the content that you will instruct. Both options allow you the flexibility to tailor the instruction to best meet the needs of your students.

### C. Examples

During this lesson, we will use examples from the *EMT-Basic: National Standard Curriculum* and the *Emergency Vehicle Operator Course (Ambulance)* to demonstrate the differences and similarities in the two main types of lesson plans that you will encounter. Sample pages from these two courses are included in Appendix B.

*INSTRUCTOR NOTES*

**Ask** a question

Are any of you familiar with either course? Tell those that are that you will be drawing on their experiences throughout the lesson.

**Display** OH #10-2

Tell participants that we will discuss each component in detail.

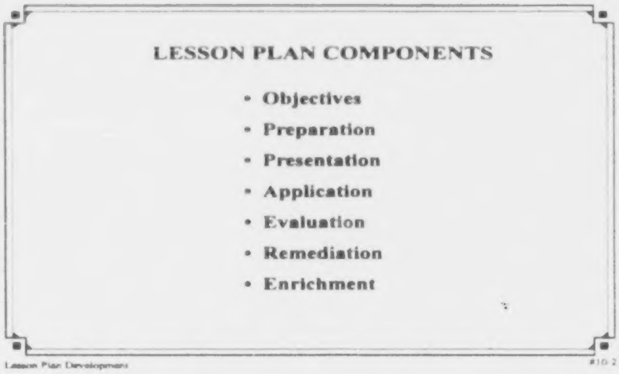
**Ask** a question

Ask participants to review pages 3-8 and 3-9 of the EMT-Basic course and page 2-1 of the EVOC course and compare the objectives.

Generate a class discussion on the differences between the two approaches.

*LESSON PLAN*

## II. Lesson Plan Components



**LESSON PLAN COMPONENTS**

- **Objectives**
- **Preparation**
- **Presentation**
- **Application**
- **Evaluation**
- **Remediation**
- **Enrichment**

Lesson Plan Development #10-2

A. Objectives

1. Importance
2. Classification

*ADDITIONAL INFORMATION*

## II. The seven basic components of any lesson plan are:

- Objectives
- Preparation
- Presentation
- Application
- Evaluation
- Remediation
- Enrichment

The terminology for the components will vary from course to course. The seven shown above are those used in the *EMT-Basic* course, but in general, should apply to any effective lesson plan.

### A. Objectives

1. Importance

The criticality of developing instruction based on well-defined Objectives was covered earlier in this course. Objectives allow both you and the students to understand immediately the expected outcomes of the lesson.

2. Classification

As we learned earlier, Objectives can be classified according to domains of learning - cognitive, affective, and psychomotor. In some lesson plans, the objectives are grouped according to these categories.

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## LESSON PLAN DEVELOPMENT

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| **Ask** a question<br>Does anyone have a question on the objectives component of a lesson plan? | 3. Examples of objectives |
| **Write** on flipchart<br>Which lesson plan elements would be part of the Preparation component?<br>Record responses on a flipchart labelled Lesson Plan/Preparation. Ask for examples. | B. Preparation<br>1. Motivation |
| **Ask** a question<br>How many [*specific type of EMS equipment*] would you need for a class of 30? | 2. Materials/Equipment |

*ADDITIONAL INFORMATION*

3. Examples of objectives

The *EMT-Basic* course groups objectives according to the targeted learning domain. Other lesson plans, like those contained in the *EVOC (Ambulance)* course, group all objectives for each lesson under the heading Performance Objectives.

In either case, the objectives for the lesson should indicate the types of learning desired and be presented in the appropriate chronological order.

In modifying lesson plans to meet the specific needs of your students, it is helpful to think about training outcomes in terms of the three domains of objectives. This will help to ensure that all of the types of learning are addressed in the lesson.

## B. Preparation

1. Motivation

The Preparation component of a lesson plan contains several elements. One is a motivational or introductory message to the students. The intent of this section is to provide an overview of the lesson content. Another purpose is to describe the importance of the lesson to the students, a "what's in it for me" message.

2. Materials/Equipment

Another element of the Preparation component of a lesson plan is the materials and/or equipment needed to present the lesson, e.g., audio/visual equipment, flipchart, exam gloves, stethoscope, blood pressure cuffs. Additional materials can include handouts, such as job aids, registration forms, and overhead transparencies that you will use in class. Any additional personnel that you will need to assist you in instructing the lesson should also be stated, e.g., EMT Instructor knowledgeable in patient assessment.

3. Prerequisites

4. Time estimated for lesson completion

Tell participants that a good guideline for timing breaks for adult learners is 50 - 90 minutes depending on the level of activity involved.

Enrichment material, which also increases the time requirement, will be covered later in this lesson.

5. Examples

**Refer** to handout

Ask participants to review pages 3-9 and 3-10 of the EMT-Basic course and pages 2-1, 2-2, and 2-3 of the EVOC course.

Generate class discussion on the differences between the two approaches.

**Ask** a question

Ask for questions on the Preparation component of lesson plans.

*ADDITIONAL INFORMATION*

3. Prerequisites

   All prerequisite knowledge or skills required by the students prior to taking the lesson should be specified. Prerequisites can be stated for the entire course, or if the course is to be used in a modular format, by lesson.

4. Time estimated for lesson completion

   Finally, the length of time estimated for lesson completion is part of the Preparation component of the lesson plan. The time estimate should include question and answer time, time for student exercises, quizzes, audio/visual presentations, and skill demonstration and practice. Also, be sure to schedule time for breaks and lunch.

   Another important consideration in planning the length of the course is to include time for any enrichment lessons that you develop to supplement the core curriculum. Enrichment lessons target audience-specific content that is in addition to the instructional material provided in the course.

   As an instructor, you must consider the characteristics and size of your student audience in creating or modifying time estimates. In preparing to instruct, you should note time estimates by lesson for lesson segment in the Instructor Guide so that you can better track your pace during actual course presentation. If your pacing is off from your original estimate, be prepared to adapt lesson content as you progress through the course.

5. Examples

   As you can see, the preparation component is part of both the *EMT-Basic* and the *EVOC (Ambulance)* courses. However, the elements are in a different order or specified at the module level rather than lesson level.

*INSTRUCTOR NOTES*

**Write** on flipchart

Which lesson plan elements are part of the Presentation component?

Record responses on a flipchart labelled Lesson Plan/Presentation.

**Refer** to handout

Ask participants to review pages 3-10 to 3-12 of the EMT-Basic course and pages 2-3 to 2-8 of the EVOC (Ambulance) course.

Generate class discussion on the differences between each approach.

**Ask** a question

Does anyone have any questions on the Presentation component of a lesson plan?

*LESSON PLAN*

C. Presentation

1. Declarative versus application
2. Format and detail differences
3. Examples

*ADDITIONAL INFORMATION*

## C. Presentation

1. Declarative vs. application

The Presentation component of a lesson plan is the actual knowledge, skills, and attitudes that you will impart to your students. The *EMT-Basic* course calls the knowledge part of the lesson plan the Declarative information to be presented. The *EMT-Basic* course calls the skills part of the lesson plan the Application portion of the program.

The Presentation section of lesson plans is where you will notice the most extreme differences in course structure. For example, some courses, like the *EVOC (Ambulance)*, do not distinguish between a Declarative and an Application section of a lesson plan; rather, the two types of content are interwoven.

2. Format and detail differences

The Presentation component of a lesson plan is also the place where you will notice the most striking differences in the level of detail provided from which to instruct, and the format of the lesson plan design.

3. Examples

For example, the Presentation section of the *EVOC Course (Ambulance)* is divided into two columns. One column is called Instructor Notes, where cues and supplemental information can be found. The other column is called Presentation. This column contains the scripted text, copies of the overhead transparencies, and detailed information on practice exercises.

The Presentation component of the *EMT-Basic* course is in outline format, and does not use icons or a column structure. Any question and answer sessions, class discussions, and overhead transparencies that the instructor feels are critical to the learning process must be prepared separately. Notice, however, that suggestions for methods to provide learning guidance are provided under the Student Activities section of each *EMT-Basic* lesson.

No matter what lesson plan style you use, it is not appropriate to read lesson plans verbatim to your class. The presentation section should be your guide from which to practice delivering the content of the lesson in a natural style, only referencing your Instructor Guide on a periodic basis.

# LESSON PLAN DEVELOPMENT

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| Tell participants that an Application component is addressed separately in the EMT-Basic course, but not in the EVOC course. | D. Application<br>1. Application versus declarative<br>2. Preparation and logistics |
| **Write** on flipchart<br>Write Application-Psychomotor skills on the flipchart. As sections are covered, list each on the flipchart. | |
| **Refer** to handout<br>Ask participants to review pages 3-12 and 3-13 of the EMT-Basic course. | 3. Application sections<br>4. Section definitions |

*ADDITIONAL INFORMATION*

## D. Application

1. Application versus declarative

The Application component of a lesson plan, as specified in the *EMT-Basic* course, is the skills portion of the lesson. The psychomotor skills lesson objectives are addressed in this section of the plan. The skills to be learned are based on the knowledge gained in the Declarative portion of the lesson.

2. Preparation and logistics

Skills requirements for EMS courses will sometimes involve extensive preparation for the instructor. For example, in an extrication class, it may be incumbent upon you to obtain an old car. If you plan to conduct a skills lesson in the classroom, be aware of special requirements. For example, student practice of splinting techniques will require moveable tables and a room that allows for plenty of room to spread out on the floor.

3. Application sections

Notice that the Application section of the *EMT-Basic* course is further subdivided into other sections. These are:

- Procedural
- Contextual
- Student Activities
- Instructor Activities

4. Section definitions

The Procedural section specifies the steps involved in performing the skill. The Contextual section presents the reasoning as to when, where, and why the student would need to use the knowledge or perform the skills covered in the lesson.

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*INSTRUCTOR NOTES*

Remind participants that instructional strategies chosen should support the learning of the lesson objectives.

**Generate** a discussion

Generate class discussion on the differences between the Application component of EMT-Basic and the EVOC course.

**Ask** a question

Are there any questions about the Application component of a lesson plan?

**Write** on flipchart

Can you tell me the various types of evaluation instruments? Record responses on a flipchart labelled Evaluation and ask for examples of each type.

*LESSON PLAN*

5. Student activities
6. Instructor activities

E. Evaluation

- Written/oral
- Practical

5. Student activities

The Student Activities section is based on the fact that students learn by various methods. The *EMT-Basic* course categorizes the methods as follows:

- Auditory (Hear)
- Visual (See)
- Kinesthetic (Do)

Within each of the three categories, recommendations are provided for presenting the lesson content so that learning is optimized for different students, no matter what their learning style happens to be.

Student Activities can be viewed as another term for instructional strategies. As we learned earlier in this course, learning can be reinforced through the use of meaningful activities that relate to the accomplishment of the lesson objectives.

6. Instructor activities

The Instructor Activities section reminds the instructor that he/she should always perform the following behaviors:

- Supervise student practice and praise progress
- Reinforce student progress in all three domains of learning (cognitive, affective, and psychomotor)
- Redirect students having difficulty with specific content.

## E. Evaluation

*Written and practical*

There are two types of Evaluation referenced in lesson plans:

- Written/oral
- Practical

| INSTRUCTOR NOTES | LESSON PLAN |
|---|---|
| **Refer** to handout<br>Ask participants to review pages 3-13, H3 and H4 of the EMT-Basic course and pages I-2, I-3, 27, 28, and 29 of the EVOC course.<br>Discuss the differences between the two approaches.<br>**Ask** a question<br>Are there any questions on the Evaluation component of a lesson plan? | 1. Generic examples<br>2. Course-specific examples |
| Tell participants that a Remediation component is addressed separately in the EMT-Basic course, but not in the EVOC course. | F. Remediation<br>1. Importance |

*ADDITIONAL INFORMATION*

1. Generic examples

Written Evaluation includes quizzes, lesson tests, module tests, and/or end-of-course tests where acquisition of knowledge and, in some cases, attitudes is measured. Practical Evaluations are skills-based assessments that determine mastery of psychomotor objectives and, in some cases, affective objectives.

2. Course specific examples

The development of appropriate Evaluation instruments was covered in detail earlier in this course, along with the design and development of learning objectives. Again, depending on the particular course you are teaching, the number and nature of the Evaluations will vary. No quizzes or tests for Written Evaluations are provided in the *EMT-Basic* course. Rather, you as the instructor must develop your own as your see appropriate. For Practical Evaluations, skill charts are provided in the *EMT-Basic* course that can be used to measure individual performance on mastering psychomotor objectives.

In other courses, such as the *EVOC (Ambulance)* course, Written Evaluation instruments are provided, as well as Practical Evaluation checklists for each module of instruction. However, when adapting the content of a lesson plan, you, as the instructor, should feel free to add to or modify Evaluation instruments for any course you teach. As part of Evaluation, remember that it is incumbent on the instructor to determine local requirements and/or policies for qualification and/or certification that involve the particular course you are teaching.

**F. Remediation**

1. Importance

Remediation goes hand-in-hand with assessment of learning objectives. It is incumbent upon the instructor to attempt to meet the needs of any student who is experiencing difficulty in mastering the course content.

# LESSON PLAN DEVELOPMENT

| *INSTRUCTOR NOTES* | *LESSON PLAN* |
|---|---|
| **Write** on flipchart<br>Ask participants for types of remediation. As types are covered, list each on the flipchart. | 2. Generic examples |
| **Refer** to handout<br>Ask participants to review Appendix G of the EMT-Basic course, Reference 10-2.<br>Generate a class discussion on the utility of the model Remediation Sheet. | 3. EMT-Basic model Remediation Sheet<br>G. Enrichment<br>1. Purpose |
| **Write** on flipchart<br>Ask participants for examples of local requirements for enrichment. Record responses on a flipchart labelled Enrichment Examples. | 2. Generic examples |

2. Generic examples

Remediation can be as simple as providing the correct answers to missed quiz items, or it can be as complex as tutoring a student outside the classroom. External reading assignments or additional practice in mastering a skill are also forms of Remediation.

3. EMT-Basic model Remediation Sheet

The *EMT-Basic* course provides a model Remediation Sheet that can be used to document any knowledge, skill, and\or attitude for which a student is experiencing difficulty in any course. The form also includes space to describe an action plan for correcting the deficiency. These forms provide a record of student progress that the instructor can use to decide if a particular student will ultimately complete the course successfully or should discontinue the course.

**G. Enrichment**

1. Purpose

The Enrichment component of a lesson plan is designed to allow you, as the instructor, to add new or supplemental information that is unique to your area or students. Enrichment lessons should be within the scope of practice and are subject to the approval of your State EMS Office.

2. Generic examples

Examples of local requirements are:

- Jellyfish injuries unique to coastal areas
- Ambulance operator reporting requirements
- Physical fitness policy for various EMS professionals
- Differing organizational policies and procedures

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# LESSON PLAN DEVELOPMENT

### *INSTRUCTOR NOTES*

**Refer** to handout

Ask participants to review Appendix F of EMT-Basic, Reference 10-3, and page 2-2 of the EVOC (Ambulance) course.

Generate class discussion on the differences between the approaches.

**Ask** a question

Are there any questions about Enrichment?

### *LESSON PLAN*

3. Course-specific examples

*ADDITIONAL INFORMATION*

3. The *EMT-Basic* course provides a format for an Enrichment Lesson Plan that can be used to develop a lesson on any Enrichment topic within that particular course. The *EVOC (Ambulance)* course, on the other hand, uses an ambulance icon to reference points within each lesson that local policies or requirements on a particular topic should be researched.

*INSTRUCTOR NOTES*

**Conduct** activity

Have students refer to their EMT Basic lesson.

They should have already developed their objectives, identified their evaluation instruments, chosen the instructional strategies, and selected their media options.

Now students will develop lesson plans and materials for 1 hour of instruction. They will present 1/2 hour of this lesson at the end of the course.

Provide individual guidance to each participant.

Depending upon the course schedule, students can draft their lesson plan outside of class and then go over the plan during the in-class activity time. However, it is essential that you present the instructional content from Lessons 1-10 prior to this activity.

*LESSON PLAN*

## III. Activity 10.1—Develop Your Own Lesson Plan

A. Work individually, referring to all of the materials you have developed so far

B. Create a one-hour lesson plan

C. Determine a segment that can be presented in a half hour for your final presentation

*ADDITIONAL INFORMATION*

## III. Activity 10.1—Develop Your Own Lesson Plan

This activity is the final step in the preparation of your Final Presentation. The instructor will provide in-class development time and the schedule may allow for preparation outside of class.

Refer to your EMT Basic lesson.

You have already developed this lesson's objectives, identified the evaluation instruments, selected instructional strategies, and selected what types of media you will use.

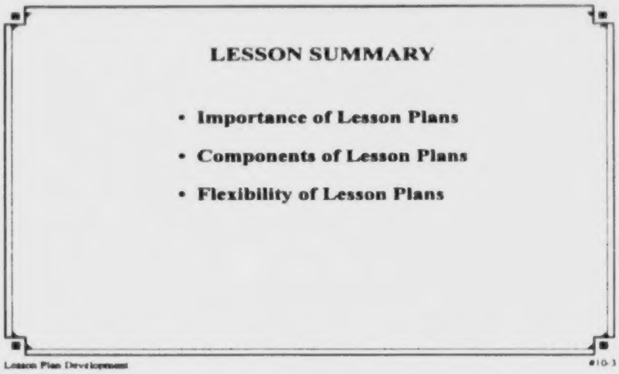
This activity focuses on pulling your instruction together. You will develop a lesson plan and materials for one hour of instruction. Materials include media, supporting materials, handouts, etc. At the end of this course, you will present one half hour of your lesson plan.

Use your handouts and refer to previous lessons for guidance. The instructor will also be available for advice and feedback.

*INSTRUCTOR NOTES* | *LESSON PLAN*

**Display** OH #10-3

## IV. Summary



LESSON SUMMARY

- Importance of Lesson Plans
- Components of Lesson Plans
- Flexibility of Lesson Plans

Lesson Plan Development

#10-3

*ADDITIONAL INFORMATION*

## IV. Summary

An EMS Instructor should be well-versed with the content and structure of any lesson plan from which he or she will teach. Although the design and level of detail will vary, it is incumbent upon the instructor to ensure that it addresses the seven basic components of an effective lesson plan. The seven components are:

- Objectives
- Preparation
- Presentation
- Application
- Evaluation
- Remediation
- Enrichment

All lesson plans should be considered flexible documents that can be tailored to meet the specific needs of each group of students.

## References

EMT-Basic: National Standard Curriculum

Emergency Vehicle Operator Course (Ambulance) National Standard Curriculum

Gagne, R.M. (1985). The Conditions of Learning.

Chicago: Holt, Rinehart and Winston, Inc.

# LESSON PLAN DEFINITION

- "Blueprint" for teaching
- Method of organizing

    - content,
    - materials,
    - equipment, and
    - resources to ensure lesson effectiveness

# PUTTING IT ALL TOGETHER—FINAL PRESENTATIONS

- Final Presentations ◄
- Peer/Instructor Feedback and Evaluation ◄
- Review of Course Objectives ◄
- Course Evaluation ◄

## FINAL PRESENTATIONS

**Objective:**

Students will demonstrate instructor skills in a realistic classroom setting.

**Time:**

30 minutes for each presentation and 15 minutes of feedback, per student

**Instructions:**

This course culminates in lesson presentations by the Instructor Trainees. Preparations are made throughout the course, primarily in the form of in-class activities. You will be assigned one of the EMT-Basic lessons located in this section as your topic. The presentations will be made during the last sessions of class, in order according to the Table of Contents. If the class is large, you may split a topic with another student.

One of the first tasks to accomplish in your preparation is a resource and literature search. Your instructor may provide textbooks and other source material. If you need assistance obtaining the materials you need, ask your instructor for assistance. Bring any resources you can to class for use during preparations.

In-class activities, beginning in Lesson 6, give you the opportunity to design, develop, and plan your instruction with instructor guidance and peer feedback. Components of your presentation include evaluating and refining lesson objectives, determining appropriate teaching methods, obtaining or creating supporting media, and the development of a lesson plan. You will be critiqued on your presentation and communication skills as well.

After each student has presented, there will be a fifteen minute opportunity for peer/instructor evaluation and feedback. Look over the Student Presentation Evaluation Form in Appendix B prior to the first presentation so that you know what to focus on for your critique.

## FINAL PRESENTATIONS (cont'd)

### Videotaped presentations

If desired, the presentations can be videotaped. If this is done, each student should be able to go into an adjacent room and view their own presentation immediately afterward. The next presentation can proceed without them, and evaluations can take place after the next person has presented, and so on. The evaluation should begin with the Instructor Trainee stating what they felt, from watching the videotape, was one strength and one thing they want to work to improve.

## EMT-BASIC LESSONS FOR FINAL PRESENTATIONS

1-1 INTRODUCTION TO EMERGENCY MEDICAL CARE

1-2 WELL-BEING OF THE EMT-BASIC

1-5 BASELINE VITAL SIGNS AND SAMPLE HISTORY

1-6 LIFTING AND MOVING PATIENTS

3-2 INITIAL ASSESSMENT

3-3 FOCUSED HISTORY AND PHYSICAL EXAM — TRAUMA PATIENTS

3-5 DETAILED PHYSICAL EXAM

3-7 COMMUNICATIONS

4-6 POISONING/OVERDOSE

5-1 BLEEDING AND SHOCK

5-3 MUSCULOSKELETAL CARE

5-4 INJURIES TO THE HEAD AND SPINE

# MODULE 1

## Preparatory

## Lesson 1-1

## Introduction to Emergency Care

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-1.1 Define Emergency Medical Services (EMS) systems.(C-1)
1-1.2 Differentiate the roles and responsibilities of the EMT-Basic from other prehospital care providers.(C-3)
1-1.3 Describe the roles and responsibilities related to personal safety.(C-1)
1-1.4 Discuss the roles and responsibilities of the EMT-Basic towards the safety of the crew, the patient and bystanders.(C-1)
1-1.5 Define quality improvement and discuss the EMT-Basic's role in the process.(C-1)
1-1.6 Define medical direction and discuss the EMT-Basic's role in the process.(C-1)
1-1.7 State the specific statutes and regulations in your state regarding the EMS system.(C-1)

### AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-1.8 Assess areas of personal attitude and conduct of the EMT-Basic.(A-3)
1-1.9 Characterize the various methods used to access the EMS system in your community.(A-3)

### PSYCHOMOTOR OBJECTIVES

No psychomotor objectives identified.

## PREPARATION

Motivation: The field of prehospital emergency medical care is an evolving profession in which the reality of life and death is confronted at a moment's notice. EMS has developed from the days when the local funeral home and other services served as the ambulance provider to a far more sophisticated system today. EMT-Basics work side by side with other health care professionals to help deliver professional prehospital emergency medical care. This course is designed to help the new EMT-Basic gain the knowledge, skills and attitude necessary to be a competent, productive, and valuable member of the emergency medical services team.

Prerequisites: BLS

### MATERIALS

AV Equipment: Utilize various audio-visual materials relating to emergency medical care. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met.

EMS Equipment: None required.

### PERSONNEL

Primary Instructor: One EMT-Basic instructor knowledgeable in EMT-Basic course overview, administrative paperwork, certification requirements, Americans with Disabilities Act issues, and roles and responsibilities of the EMT-Basic.

Assistant Instructor: None required.

Recommended Minimum Time to Complete: One and a half hours

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## PRESENTATION

Declarative (What)

- I. Course Overview
  - A. Paperwork
    - 1. Local
    - 2. State
  - B. Course description and expectations
  - C. Immunizations/physical exam
  - D. Review criteria for certification
    - 1. Successful course completion
    - 2. Mentally/physically meet criteria of safe and effective practice of job functions
    - 3. Written examination
    - 4. Practical examination
    - 5. State and local provisions
  - E. Implications of Americans with Disabilities Act (ADA) - state and local policies
  - F. Implications of harassment - state and local policies
- II. The Emergency Medical Services System and the Emergency Medical Technician-Basic
  - A. Overview of the Emergency Medical Services system
    - 1. National Highway Traffic Safety Administration Technical Assistance Program Assessment Standards
      - a. Regulation and policy
      - b. Resource management
      - c. Human resources and training
      - d. Transportation
      - e. Facilities
      - f. Communications
      - g. Public information and education
      - h. Medical direction
      - i. Trauma systems
      - j. Evaluation
    - 2. Access to the system
      - a. 9-1-1
      - b. Non 9-1-1

3. Levels of training
    a. First Responder
    b. EMT-Basic
    c. EMT-Intermediate
    d. EMT-Paramedic
4. The health care system
    a. Emergency departments
    b. Specialty facilities
        (1) Trauma centers
        (2) Burn centers
        (3) Pediatric centers
        (4) Poison centers
        (5) Other specialty centers - locally dependent
5. Hospital personnel
    a. Physicians
    b. Nurses
    c. Other health professionals
6. Liaison with other public safety workers
    a. Local law enforcement
    b. State and federal law enforcement
7. Overview of the local EMS system

B. Roles and Responsibilities of the EMT-Basic
1. Personal safety
2. Safety of crew, patient and bystanders
3. Patient assessment
4. Patient care based on assessment findings
5. Lifting and moving patients safely
6. Transport/transfer of care
7. Record keeping/data collection
8. Patient advocacy (patient rights) - patient as a whole

C. Professional attributes
1. Appearance
    a. Neat
    b. Clean
    c. Positive image
2. Maintains up-to-date knowledge and skills
    a. Continuing education
    b. Refresher courses
3. Puts patient's needs as a priority without endangering self.
4. Maintains current knowledge of local, state, and national issues affecting EMS.

D. Quality improvement
  1. Definition - a system of internal/external reviews and audits of all aspects of an EMS system so as to identify those aspects needing improvement to assure that the public receives the highest quality of prehospital care.
  2. The role of the EMT-Basic in quality improvement
    a. Documentation
    b. Run reviews and audits
    c. Gathering feedback from patients and hospital staff
    d. Conducting preventative maintenance
    e. Continuing education
    f. Skill maintenance

E. Medical direction
  1. Definition
    a. A physician responsible for the clinical and patient care aspects of an EMS system.
    b. Every ambulance service/rescue squad must have physician medical direction.
    c. Types of medical direction
      (1) On-line
        (a) Telephone
        (b) Radio
      (2) Off-line
        (a) Protocols
        (b) Standing orders
    d. Responsible for reviewing quality improvement
  2. The relationship of the EMT-Basic to medical direction
    a. Designated agent of the physician
    b. Care rendered is considered an extension of the medical director's authority (varies by state law).

F. Specific statutes and regulations regarding EMS in your state

## APPLICATION

### Procedural (How)

None identified for this lesson.

### Contextual (When, Where, Why)

The student will use this information throughout the course to enhance his understanding and provide direction for the EMT-Basic's relationship to the individual components of the EMS system. The lesson will provide the student with a road map for learning the skill and knowledge domains of the EMT-Basic. Additionally, this lesson will identify that not all students meet the mental and physical requirements of the career field. After completion of the course, the EMT-Basic will use this information to understand the process of gaining and maintaining certification, as well as understanding state and local legislation affecting the profession. This lesson sets the foundation for the remaining teaching/learning process. A positive, helpful attitude presented by the instructor is *essential* to assuring a positive, helpful attitude from the student.

## STUDENT ACTIVITY

### Auditory (Hear)

1. Students will hear specifically what they can expect to receive from the training program.
2. Students will hear the specific expectations of the training program.
3. Students will hear actual state and local legislation relative to EMS practice and certification.

### Visual (See)

1. Students will see audio-visual aids or materials explaining the components of the health care system, EMT-Basic level of care, EMT-Basic's roles and responsibilities, professional attributes, and certification requirements.
2. Students will receive a copy of the cognitive, affective and psychomotor objectives for the entire curriculum.
3. Students will receive the final skill evaluation instruments.

### Kinesthetic (Do)

1. Students will practice situations in which EMT-Basics portray professional attributes and experience ethical dilemmas.
2. Students will complete the necessary course paperwork.
3. Students will indicate if they will require/request assistance during the course or certification process based on the Americans with Disabilities Act. Additionally, students will provide the necessary documentation to support the requirements/request.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation form).

## EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

# MODULE 1

## Preparatory

## Lesson 1-2

## Well-Being of the EMT-Basic

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-2.1 List possible emotional reactions that the EMT-Basic may experience when faced with trauma, illness, death and dying. (C-1)

1-2.2 Discuss the possible reactions that a family member may exhibit when confronted with death and dying.(C-1)

1-2.3 State the steps in the EMT-Basic's approach to the family confronted with death and dying.(C-1)

1-2.4 State the possible reactions that the family of the EMT-Basic may exhibit due to their outside involvement in EMS.(C-1)

1-2.5 Recognize the signs and symptoms of critical incident stress.(C-1)

1-2.6 State possible steps that the EMT-Basic may take to help reduce/alleviate stress.(C-1)

1-2.7 Explain the need to determine scene safety. (C-2)

1-2.8 Discuss the importance of body substance isolation (BSI).(C-1)

1-2.9 Describe the steps the EMT-Basic should take for personal protection from airborne and bloodborne pathogens.(C-1)

1-2.10 List the personal protective equipment necessary for each of the following situations:(C-1)

- Hazardous materials
- Rescue operations
- Violent scenes
- Crime scenes
- Exposure to bloodborne pathogens
- Exposure to airborne pathogens

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-2.11 Explain the rationale for serving as an advocate for the use of appropriate protective equipment. (A-3)

## PSYCHOMOTOR OBJECTIVES

1-2.12 Given a scenario with potential infectious exposure, the EMT-Basic will use appropriate personal protective equipment. At the completion of the scenario, the EMT-Basic will properly remove and discard the protective garments. (P-1,2)

1-2.13 Given the above scenario, the EMT-Basic will complete disinfection/cleaning and all reporting documentation.(P-1,2)

## PREPARATION

|  |  |
|---|---|
| Motivation: | EMT-Basics encounter many stressful situations providing emergency medical care to patients. These range from death and terminal illness to major traumatic situations and child abuse. EMT-Basics will treat angry, scared, violent, seriously injured and ill patients and family members. The EMT-Basic is not immune from the personal effects of these situations. EMT-Basics will learn during this lesson what to expect and how to assist the patient, patient's family, the EMT-Basic's family and other EMT-Basics in dealing with the stress. This lesson discusses methods of talking to friends and family, without violating confidentiality, but as a means of helping them cope with involvement in EMS. Finally, aspects of personal safety will be discussed. It is important to realize this is only a brief overview and will be readdressed with each specific skill or topic. To put this in perspective, remember: A dead or injured EMT-Basic is of little or no use to a patient. |
| Prerequisites: | BLS |

## MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to the well-being of the EMT-Basic. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met. |
| EMS Equipment: | Eye protection, gowns, gloves, masks, forms for reporting exposures. |

## PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in critical incident stress debriefing, identifying child/elderly abuse, stages of death and dying, and aspects of scene safety. |
| Assistant Instructor: | None required. |
| Recommended Minimum Time to Complete: | One and a half hours |

## PRESENTATION

Declarative (What)

I. Emotional Aspects of Emergency Care
    A. Death and dying
        1. Stages
            a. Denial ("Not me.") - defense mechanism creating a buffer between shock of dying and dealing with the illness/injury.
            b. Anger ("Why me.")
                (1) EMT-Basics may be the target of the anger.
                (2) Don't take anger or insults personally.
                    (a) Be tolerant.
                    (b) Do not become defensive.
                (3) Employ good listening and communication skills.
                (4) Be empathetic.

            c. Bargaining ("OK, but first let me...") - agreement that, in the patient's mind, will postpone the death for a short time.
            d. Depression ("OK, but I haven't...")
                (1) Characterized by sadness and despair.
                (2) Patient is usually silent and retreats into his own world.
            e. Acceptance ("OK, I am not afraid.")
                (1) Does not mean the patient will be happy about dying.
                (2) The family will usually require more support during this stage than the patient.
        2. Dealing with the dying patient and family members
            a. Patient needs include dignity, respect, sharing, communication, privacy and control.
            b. Family members may express rage, anger and despair.
            c. Listen empathetically.
            d. Do not falsely reassure.
            e. Use a gentle tone of voice.
            f. Let the patient know everything that can be done to help will be done.
            g. Use a reassuring touch, if appropriate.
            h. Comfort the family.

B. Stressful situations
    1. Examples of situations that may produce a stress response
        a. Mass casualty situations
        b. Infant and child trauma
        c. Amputations
        d. Infant/child/elder/spouse abuse
        e. Death/injury of co-worker or other public safety personnel
    2. The EMT-Basic will experience personal stress as well as encounter patients and bystanders in severe stress.

C. Stress management
    1. Recognize warning signs
        a. Irritability to co-workers, family, friends
        b. Inability to concentrate
        c. Difficulty sleeping/nightmares
        d. Anxiety
        e. Indecisiveness
        f. Guilt
        g. Loss of appetite

        - h. Loss of interest in sexual activities
        - i. Isolation
        - j. Loss of interest in work
    - 2. Life-style changes
        - a. Helpful for "job burnout"
        - b. Change diet
            - (1) Reduce sugar, caffeine and alcohol intake
            - (2) Avoid fatty foods
            - (3) Increase carbohydrates
        - c. Exercise
        - d. Practice relaxation techniques, meditation, visual imagery
    - 3. Balance work, recreation, family, health, etc.
    - 4. EMS personnel and their family's and friends' responses
        - a. Lack of understanding
        - b. Fear of separation and being ignored
        - c. On-call situations cause stress
        - d. Can't plan activities
        - e. Frustration caused by wanting to share
    - 5. Work environment changes
        - a. Request work shifts allowing for more time to relax with family and friends.
        - b. Request a rotation of duty assignment to a less busy area.
    - 6. Seek/refer professional help.
- D. Critical incident stress debriefing (CISD)
    - 1. A team of peer counsellors and mental health professionals who help emergency care workers deal with critical incident stress.
    - 2. Meeting is held within 24 to 72 hours of a major incident.
        - a. Open discussion of feelings, fears, and reactions
        - b. Not an investigation or interrogation
        - c. All information is confidential
        - d. CISD leaders and mental health personnel evaluate the information and offer suggestions on overcoming the stress.
    - 3. Designed to accelerate the normal recovery process after experiencing a critical incident.
        - a. Works well because feelings are ventilated quickly.
        - b. Debriefing environment is non-threatening.
    - 4. How to access local CISD system.

- E. Comprehensive critical incident stress management includes:
  - 1. Pre-incident stress education
  - 2. On-scene peer support
  - 3. One-on-one support
  - 4. Disaster support services
  - 5. Defusings
  - 6. CISD
  - 7. Follow up services
  - 8. Spouse/family support
  - 9. Community outreach programs
  - 10. Other health and welfare programs such as wellness programs

- II. Scene Safety
  - A. Body substance isolation (BSI) (Bio-Hazard)
    - 1. EMT-Basic's and patient's safety
      - a. Hand washing
      - b. Eye protection
        - (1) If prescription eyeglasses are worn, then removable side shields can be applied to them.
        - (2) Goggles are NOT required.
      - c. Gloves (vinyl or latex)
        - (1) Needed for contact with blood or bloody body fluids.
        - (2) Should be changed between contact with different patients.
      - d. Gloves (utility) - needed for cleaning vehicles and equipment
      - e. Gowns
        - (1) Needed for large splash situations such as with field delivery and major trauma.
        - (2) Change of uniform is preferred.
      - f. Masks
        - (1) Surgical type for possible blood splatter (worn by care provider)
        - (2) High Efficiency Particulate Air (HEPA) respirator if patient suspected for or diagnosed with tuberculosis (worn by care provider)
        - (3) Airborne disease - surgical type mask (worn by patient)
      - g. Requirements and availability of specialty training

  - 2. OSHA/state regulations regarding BSI
  - 3. Statutes/regulations reviewing notification and testing in an exposure incident
- B. Personal protection
  - 1. Hazardous materials
    - a. Identify possible hazards
      - (1) Binoculars
      - (2) Placards
      - (3) *Hazardous Materials, The Emergency Response Handbook*, published by the United States Department of Transportation
    - b. Protective clothing
      - (1) Hazardous material suits
      - (2) Self Contained Breathing Apparatus
    - c. Hazardous materials scenes are controlled by specialized Haz-Mat teams.
    - d. EMT-Basics provide emergency care only after the scene is safe and patient contamination limited.
    - e. Requirements and availability of specialized training
  - 2. Rescue
    - a. Identify and reduce potential life threats.
      - (1) Electricity
      - (2) Fire
      - (3) Explosion
      - (4) Hazardous materials
    - b. Protective clothing
      - (1) Turnout gear
      - (2) Puncture-proof gloves
      - (3) Helmet
      - (4) Eye wear
    - c. Dispatch rescue teams for extensive/heavy rescue.

3. Violence
    a. Scene should always be controlled by law enforcement before EMT-Basic provides patient care.
        (1) Perpetrator of the crime
        (2) Bystanders
        (3) Family members
    b. Behavior at crime scene (covered in greater detail in Medical/Legal and Ethical Issues, Module 1, Lesson 1-3).
        (1) Do not disturb the scene unless required for medical care.
        (2) Maintain chain of evidence.

III. Safety Precautions in Advance - Suggested Immunizations
    A. Tetanus prophylaxis
    B. Hepatitis B vaccine
    C. Verification of immune status with respect to commonly transmitted contagious diseases
    D. Access or availability of immunizations in the community
    E. Tuberculin purified protein derivative (PPD) testing
    F. Others

## APPLICATION

### Procedural (How)

1. The EMT-Basic will know how to access additional information on hazardous materials and infectious disease exposure, notification and follow-up.

### Contextual (When, Where, Why)

1. The EMT-Basic will use the aspects of scene safety and personal protection every day and on every emergency run.
2. While the EMT-Basic may not be a member of a hazardous material or heavy rescue team, this lesson should provide the personal incentive to seek out and attend continuing education programs relative to personal safety during hazardous material incidents, rescue situations and violent crime scenes.
3. If the EMT-Basic fails to develop personal safety skills, his EMT-Basic career may come to a premature end through serious injury or death.

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4. The well-being of the EMT-Basic depends upon his ability to recognize that stressful traumatic situations do occur and the effect of those situations is felt by the patient, family members and the EMT-Basic. In recognizing this, the EMT-Basic must be aware of internal and external mechanisms to help himself, the patient, patient's families, EMT-Basic's family and other EMT-Basics deal with reactions to stress.
5. The EMT-Basic will use proper communication techniques when dealing with the grieving process.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. The student will hear the instructor demonstrate methods of communicating with patients and family members of terminally ill patients.
2. The student will hear the instructor demonstrate methods of communicating with friends and family members of a dead or dying patient.

### Visual (See)

1. The student will see various audio-visual aids or materials of scenes requiring personal protection.
2. The student will see various audio-visual aids or materials of personal protection clothing worn by hazardous material/rescue teams.
3. The student will see the gown, gloves, mask and eye protection associated with body substance isolation (BSI).

### Kinesthetic (Do)

1. The student will practice role play, talking to patients in various stressful/traumatic situations.
2. The student will practice putting on and removing gowns, gloves and eye protection gear.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

# MODULE 1

## Preparatory

## Lesson 1-5

## Baseline Vital Signs and SAMPLE History

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-5.1 Identify the components of vital signs.(C-1)
1-5.2 Describe the methods to obtain a breathing rate.(C-1)
1-5.3 Identify the attributes that should be obtained when assessing breathing.(C-1)
1-5.4 Differentiate between shallow, labored and noisy breathing.(C-3)
1-5.5 Describe the methods to obtain a pulse rate.(C-1)
1-5.6 Identify the information obtained when assessing a patient's pulse.(C-1)
1-5.7 Differentiate between a strong, weak, regular and irregular pulse.(C-3)
1-5.8 Describe the methods to assess the skin color, temperature, condition (capillary refill in infants and children).(C-1)
1-5.9 Identify the normal and abnormal skin colors.(C-1)
1-5.10 Differentiate between pale, blue, red and yellow skin color. (C-3)
1-5.11 Identify the normal and abnormal skin temperature.(C-1)
1-5.12 Differentiate between hot, cool and cold skin temperature. (C-3)
1-5.13 Identify normal and abnormal skin conditions.(C-1)
1-5.14 Identify normal and abnormal capillary refill in infants and children.(C-1)
1-5.15 Describe the methods to assess the pupils.(C-1)
1-5.16 Identify normal and abnormal pupil size.(C-1)
1-5.17 Differentiate between dilated (big) and constricted (small) pupil size. (C-3)
1-5.18 Differentiate between reactive and non-reactive pupils and equal and unequal pupils. (C-3)
1-5.19 Describe the methods to assess blood pressure.(C-1)

1-5.20 Define systolic pressure.(C-1)
1-5.21 Define diastolic pressure.(C-1)
1-5.22 Explain the difference between auscultation and palpation for obtaining a blood pressure.(C-1)
1-5.23 Identify the components of the SAMPLE history.(C-1)
1-5.24 Differentiate between a sign and a symptom. (C-3)
1-5.25 State the importance of accurately reporting and recording the baseline vital signs.(C-1)
1-5.26 Discuss the need to search for additional medical identification.(C-1)

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-5.27 Explain the value of performing the baseline vital signs.(A-2)
1-5.28 Recognize and respond to the feelings patients experience during assessment.(A-1)
1-5.29 Defend the need for obtaining and recording an accurate set of vital signs.(A-3)
1-5.30 Explain the rationale of recording additional sets of vital signs.(A-1)
1-5.31 Explain the importance of obtaining a SAMPLE history.(A-1)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-5.32 Demonstrate the skills involved in assessment of breathing.(P-1,2)
1-5.33 Demonstrate the skills associated with obtaining a pulse. (P-1,2)
1-5.34 Demonstrate the skills associated with assessing the skin color, temperature, condition, and capillary refill in infants and children.(P-1,2)
1-5.35 Demonstrate the skills associated with assessing the pupils. (P-1,2)
1-5.36 Demonstrate the skills associated with obtaining blood pressure.(P-1,2)
1-5.37 Demonstrate the skills that should be used to obtain information from the patient, family, or bystanders at the scene. (P-1,2)

## PREPARATION

| | |
|---|---|
| Motivation: | An EMT-Basic must be able to accurately assess and record a patient's vital signs. This must be done to record trends in the patient's condition. In addition to vital signs, obtain a SAMPLE history in the event that the patient loses consciousness. |
| Prerequisite Skills: | BLS |

### MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to vital signs and SAMPLE history. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met. |
| EMS Equipment: | Exam gloves, stethoscope (dual and single head)(1:6), blood pressure cuffs (adult, infant and child)(1:6), penlights (1:6). |

### PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in patient assessment. |
| Assistant Instructor: | The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in assessing baseline vital signs and SAMPLE histories. |
| Recommended Minimum Time to Complete: | Two hours |

## PRESENTATION

Declarative (What)

I. General Information
    A. Chief complaint - why EMS was notified
    B. Age - years, months, days
    C. Sex - male or female
    D. Race
II. Baseline Vital Signs
    A. Breathing - assessed by observing the patient's chest rise and fall.
        1. Rate is determined by counting the number of breaths in a 30-second period and multiplying by 2. Care should be taken not to inform the patient, to avoid influencing the rate.
        2. Quality of breathing can be determined while assessing the rate. Quality can be placed in 1 of 4 categories:
            a. Normal - average chest wall motion, not using accessory muscles.
            b. Shallow - slight chest or abdominal wall motion.
            c. Labored
                (1) An increase in the effort of breathing
                (2) Grunting and stridor
                (3) Often characterized by the use of accessory muscles
                (4) Nasal flaring, supraclavicular and intercostal retractions in infants and children
                (5) Sometimes gasping
            d. Noisy - an increase in the audible sound of breathing. May include snoring, wheezing, gurgling, crowing.
    B. Pulse
        1. Initially a radial pulse should be assessed in all patients one year or older. In patients less than one year of age a brachial pulse should be assessed.
        2. If the pulse is present, assess rate and quality.
            a. Rate is the number of beats felt in 30 seconds multiplied by 2.
            b. Quality of the pulse can be characterized as:
                (1) Strong
                (2) Weak
                (3) Regular

            (4) Irregular
    3. If peripheral pulse is not palpable, assess carotid pulse.
        a. Use caution. Avoid excess pressure on geriatrics.
        b. Never attempt to assess carotid pulse on both sides at one time.

C. Assess skin to determine perfusion.
    1. The patient's color should be assessed in the nail beds, oral mucosa, and conjunctiva.
        a. In infants and children, palms of hands and soles of feet should be assessed.
        b. Normal skin - pink
        c. Abnormal skin colors
            (1) Pale - indicating poor perfusion (impaired blood flow)
            (2) Cyanotic (blue-gray) - indicating inadequate oxygenation or poor perfusion
            (3) Flushed (red) - indicating exposure to heat or carbon monoxide poisoning.
            (4) Jaundice (yellow) - indicating liver abnormalities
    2. The patient's temperature should be assessed by placing the back of your hand on the patient's skin.
        a. Normal - warm
        b. Abnormal skin temperatures
            (1) Hot - indicating fever or an exposure to heat.
            (2) Cool - indicating poor perfusion or exposure to cold.
            (3) Cold - indicates extreme exposure to cold.
    3. Assess the condition of the patient's skin.
        a. Normal - dry
        b. Abnormal - skin is wet, moist, or dry.
    4. Assess capillary refill in infants and children less than six years of age.
        a. Capillary refill in infants and children is assessed by pressing on the patient's skin or nail beds and determining time for return to initial color.
        b. Normal capillary refill in infants and children is < 2 seconds.
        c. Abnormal capillary refill in infants and children is > 2 seconds.

D. Pupils are assessed by briefly shining a light into the patient's eyes, and determining size and reactivity.
  1. Dilated (very big), normal, or constricted (small).
  2. Equal or unequal
  3. Reactivity is whether or not the pupils change in response to the light.
    a. Reactive - change when exposed to light
    b. Non-reactive - do not change when exposed to light
    c. Equally or unequally reactive

E. Blood pressure
  1. Assess systolic and diastolic pressures.
    a. Systolic blood pressure is the first distinct sound of blood flowing through the artery as the pressure in the blood pressure cuff is released. This is a measurement of the pressure exerted against the walls of the arteries during contraction of the heart.
    b. Diastolic blood pressure is the point during deflation of the blood pressure cuff at which sounds of the pulse beat disappear. It represents the pressure exerted against the walls of the arteries while the left ventricle is at rest.
    c. There are two methods of obtaining blood pressure.
      (1) Auscultation: In this case the EMT-Basic will listen for the systolic and diastolic sounds.
      (2) Palpation: In certain situations, the systolic blood pressure may be measured by feeling for return of pulse with deflation of the cuff.
  2. Blood pressure should be measured in all patients older than 3 years of age.
  3. The general assessment of the infant or child patient, such as sick appearing, in respiratory distress, or unresponsive, is more valuable than vital sign numbers.

F. Vital sign reassessment
  1. Vital signs should be assessed and recorded every 15 minutes at a minimum in a stable patient.
  2. Vital signs should be assessed and recorded every 5 minutes in the unstable patient.
  3. Vital signs should be assessed following all medical interventions.

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III. Obtain an SAMPLE history.
  A. Signs/Symptoms
    1. Sign - any medical or trauma condition displayed by the patient and identifiable by the EMT-Basic, e.g., Hearing = respiratory distress, Seeing = bleeding, Feeling = skin temperature.
    2. Symptom - any condition described by the patient, e.g., shortness of breath.
  B. Allergies
    1. Medications
    2. Food
    3. Environmental allergies
    4. Consider medical identification tag
  C. Medications
    1. Prescription
      a. Current
      b. Recent
      c. Birth control pills
    2. Non-prescription
      a. Current
      b. Recent
    3. Consider medical identification tag
  D. Pertinent Past History
    1. Medical
    2. Surgical
    3. Trauma
    4. Consider medical identification tag
  E. Last oral intake: Solid or liquid
    1. Time
    2. Quantity
  F. Events leading to the injury or illness
    1. Chest pain with exertion
    2. Chest pain while at rest

## APPLICATION

### Procedural (How)

1. Demonstrate the skill of assessing breathing.
2. Demonstrate the skill of determining a pulse.

3. Demonstrate the skill of determining skin color, temperature, condition.
4. Demonstrate the skill of determining capillary refill in infants and children.
5. Demonstrate the skill of assessing pupils for size, reactivity and equality.
6. Demonstrate the skill of assessing blood pressure
   a. Auscultation
   b. Palpation
7. Discussion on questioning techniques to obtain history.

### Contextual (When, Where, Why)

Accurate measurement and recording of vital signs over a period of time may indicate a trend in the patient's condition and be valuable in the continuum of care. There are a number of interventions that the EMT-Basic can perform; however, these skills cannot be performed without an accurate set of baseline vital signs. The SAMPLE history is important to guide the pace of the EMT-Basic and assist in the continuum of care at the receiving facility.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Students should hear normal and abnormal breathing.
2. Student should hear with a stethoscope and assess systolic and diastolic pressures.
3. Student should hear 5 components of the SAMPLE history.

### Visual (See)

1. Students should see a simulated or actual patient's chest rise and fall and assess rate and quality of breathing.
2. Students should see appropriate areas of the body to assess the color and condition (and in infants and children < 6 years of age, the capillary refill).
3. Students should see pupils to assess size, reactivity and equality.

### Kinesthetic (Do)

1. Students should practice methods for assessing breathing.
2. Students should practice methods for obtaining a pulse.
3. Students should practice methods for determining skin color, temperature, condition, (and capillary refill in infants and children < 6 years of age).
4. Students should practice methods for determining pupil size, reactivity and equality.
5. Students should practice methods for determining blood pressure by auscultation and palpation.
6. Students should practice methods for obtaining an SAMPLE history.

7. Students should practice completing a prehospital care report including vital signs and SAMPLE history.

### INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

# MODULE 1

## Preparatory

## Lesson 1-6

## Lifting and Moving Patients

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-6.1 Define body mechanics. (C-1)
1-6.2 Discuss the guidelines and safety precautions that need to be followed when lifting a patient.(C-1)
1-6.3 Describe the safe lifting of cots and stretchers.(C-1)
1-6.4 Describe the guidelines and safety precautions for carrying patients and/or equipment.(C-1)
1-6.5 Discuss one-handed carrying techniques.(C-1)
1-6.6 Describe correct and safe carrying procedures on stairs.(C-1)
1-6.7 State the guidelines for reaching and their application. (C-1)
1-6.8 Describe correct reaching for log rolls.(C-1)
1-6.9 State the guidelines for pushing and pulling.(C-1)
1-6.10 Discuss the general considerations of moving patients.(C-1)
1-6.11 State three situations that may require the use of an emergency move.(C-1)
1-6.12 Identify the following patient carrying devices:
  - Wheeled ambulance stretcher
  - Portable ambulance stretcher
  - Stair chair
  - Scoop stretcher
  - Long spine board
  - Basket stretcher
  - Flexible stretcher (C-1)

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-6.13 Explain the rationale for properly lifting and moving patients.(A-3)

## PSYCHOMOTOR OBJECTIVES

1-6.14 Working with a partner, prepare each of the following devices for use, transfer a patient to the device, properly position the patient on the device, move the device to the ambulance and load the patient into the ambulance:

- Wheeled ambulance stretcher
- Portable ambulance stretcher
- Stair chair
- Scoop stretcher
- Long spine board
- Basket stretcher
- Flexible stretcher (P-1,2)

1-6.15 Working with a partner, the EMT-Basic will demonstrate techniques for the transfer of a patient from an ambulance stretcher to a hospital stretcher.(P-1,2)

## PREPARATION

Motivation: Many EMT-Basics are injured every year because they attempt to lift patients improperly.

Prerequisites: BLS

### MATERIALS

AV Equipment: Utilize various audio-visual materials relating to lifting and moving techniques. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met.

EMS Equipment: Wheeled stretcher, stair chair, scoop stretcher, flexible stretcher, ambulance, long and short backboards, bed.

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## PERSONNEL

Primary Instructor: One EMT-Basic instructor knowledgeable in this area.

Assistant Instructor: The instructor-to-student ratio should be 1:6 for psychomotor skills practice. Individuals used as assistant instructors should be knowledgeable about lifting and moving patients.

Recommended Minimum Time to Complete: Three hours

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## PRESENTATION

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### Declarative (What)

- I. Body Mechanics
  - A. Lifting techniques
    - 1. Safety precautions
      - a. Use legs, not back, to lift.
      - b. Keep weight as close to body as possible.
    - 2. Guidelines for lifting
      - a. Consider weight of patient and need for additional help.
      - b. Know physical ability and limitations.
      - c. Lift without twisting.
      - d. Have feet positioned properly.
      - e. Communicate clearly and frequently with partner.
    - 3. Safe lifting of cots and stretchers. When possible use a stair chair instead of a stretcher if medically appropriate.
      - a. Know or find out the weight to be lifted.
      - b. Use at least two people.
      - c. Ensure enough help available. Use an even number of people to lift so that balance is maintained.
        - (1) Know or find out the weight limitations of equipment being used.
        - (2) Know what to do with patients who exceed weight limitations of equipment.

        d. Using power-lift or squat lift position, keep back locked into normal curvature. The power-lift position is useful for individuals with weak knees or thighs. The feet are a comfortable distance apart. The back is tight and the abdominal muscles lock the back in a slight inward curve. Straddle the object. Keep feet flat. Distribute weight to balls of feet or just behind them. Stand by making sure the back is locked in and the upper body comes up before the hips.
        e. Use power grip to get maximum force from hands. The palm and fingers come into complete contact with the object and all fingers are bent at the same angles. The power-grip should always be used in lifting. This allows for maximum force to be developed. Hands should be at least 10 inches apart.
        f. Lift while keeping back in locked-in position.
        g. When lowering cot or stretcher, reverse steps.
        h. Avoid bending at the waist.

B. Carrying
    1. Precautions for carrying - whenever possible, transport patients on devices that can be rolled.
    2. Guidelines for carrying
        a. Know or find out the weight to be lifted.
        b. Know limitations of the crew's abilities.
        c. Work in a coordinated manner and communicate with partners.
        d. Keep the weight as close to the body as possible.
        e. Keep back in a locked-in position and refrain from twisting.
        f. Flex at the hips, not the waist; bend at the knees.
        g. Do not hyperextend the back (do not lean back from the waist).
    3. Correct carrying procedure
        a. Use correct lifting techniques to lift the stretcher.
        b. Partners should have similar strength and height.
    4. One-handed carrying technique
        a. Pick up and carry with the back in the locked-in position.
        b. Avoid leaning to either side to compensate for the imbalance.

5. Correct carrying procedure on stairs
    a. When possible, use a stair chair instead of a stretcher.
    b. Keep back in locked-in position.
    c. Flex at the hips, not the waist; bend at the knees.
    d. Keep weight and arms as close to the body as possible.

C. Reaching
1. Guidelines for reaching
    a. Keep back in locked-in position.
    b. When reaching overhead, avoid hyperextended position.
    c. Avoid twisting the back while reaching.
2. Application of reaching techniques
    a. Avoid reaching more than 15 - 20 inches in front of the body.
    b. Avoid situations where prolonged (more than a minute) strenuous effort is needed in order to avoid injury.
3. Correct reaching for log rolls
    a. Keep back straight while leaning over patient.
    b. Lean from the hips.
    c. Use shoulder muscles to help with roll.

D. Pushing and pulling guidelines
1. Push, rather than pull, whenever possible.
2. Keep back locked-in.
3. Keep line of pull through center of body by bending knees.
4. Keep weight close to the body.
5. Push from the area between the waist and shoulder.
6. If weight is below waist level, use kneeling position.
7. Avoid pushing or pulling from an overhead position if possible.
8. Keep elbows bent with arms close to the sides.

II. Principles of Moving Patients
A. General considerations
1. In general, a patient should be moved immediately (emergency move) only when:
    a. There is an immediate danger to the patient if not moved.
        (1) Fire or danger of fire.
        (2) Explosives or other hazardous materials.
        (3) Inability to protect the patient from other hazards at the scene.
        (4) Inability to gain access to other patients in a vehicle who need life-saving care.

        b. Life-saving care cannot be given because of the patient's location or position, e.g., a cardiac arrest patient sitting in a chair or lying on a bed.
    2. A patient should be moved quickly (urgent move) when there is immediate threat to life.
        a. Altered mental status
        b. Inadequate breathing
        c. Shock (hypoperfusion)
    3. If there is no threat to life, the patient should be moved when ready for transportation (non-urgent move).

B. Emergency moves
    1. The greatest danger in moving a patient quickly is the possibility of aggravating a spine injury.
    2. In an emergency, every effort should be made to pull the patient in the direction of the long axis of the body to provide as much protection to the spine as possible.
    3. It is impossible to remove a patient from a vehicle quickly and at the same time provide as much protection to the spine as can be accomplished with an interim immobilization device.
    4. If the patient is on the floor or ground, he can be moved by:
        a. Pulling on the patient's clothing in the neck and shoulder area.
        b. Putting the patient on a blanket and dragging the blanket.
        c. Putting the EMT-Basic's hands under the patient's armpits (from the back), grasping the patient's forearms and dragging the patient.

C. Urgent moves
    1. Rapid extrication of patient sitting in vehicle
        a. One EMT-Basic gets behind patient and brings cervical spine into neutral in-line position and provides manual immobilization.
        b. A second EMT-Basic applies cervical immobilization device as the third EMT-Basic first places long backboard near the door and then moves to the passenger seat.
        c. The second EMT-Basic supports the thorax as the third EMT-Basic frees the patient's legs from the pedals.
        d. At the direction of the second EMT-Basic, he and the third EMT-Basic rotate the patient in several short, coordinated moves until the patient's back is in the open doorway and his feet are on the passenger seat.

e. Since the first EMT-Basic usually cannot support the patient's head any longer, another available EMT-Basic or a bystander supports the patient's head as the first EMT-Basic gets out of the vehicle and takes support of the head outside of the vehicle.
f. The end of the long backboard is placed on the seat next to the patient's buttocks. Assistants support the other end of the board as the first EMT-Basic and the second EMT-Basic lower the patient onto it.
g. The second EMT-Basic and the third EMT-Basic slide the patient into the proper position on the board in short, coordinated moves.
h. Several variations of the technique are possible, including assistance from bystanders. Must be accomplished without compromise to the spine.

D. Non-urgent moves

1. Direct ground lift (no suspected spine injury)
a. Two or three rescuers line up on one side of the patient.
b. Rescuers kneel on one knee (preferably the same for all rescuers).
c. The patient's arms are placed on his chest if possible.
d. The rescuer at the head places one arm under the patient's neck and shoulder and cradles the patient's head. He places his other arm under the patient's lower back.
e. The second rescuer places one arm under the patient's knees and one arm above the buttocks.
f. If a third rescuer is available, he should place both arms under the waist and the other two rescuers slide their arms either up to the mid-back or down to the buttocks as appropriate.
g. On signal, the rescuers lift the patient to their knees and roll the patient in toward their chests.
h. On signal, the rescuers stand and move the patient to the stretcher.
i. To lower the patient, the steps are reversed.

2. Extremity lift (no suspected extremity injuries)
a. One rescuer kneels at the patient's head and one kneels at the patient's side by his knees.

  - b. The rescuer at the head places one hand under each of the patient's shoulders while the rescuer at the foot grasps the patient's wrists.
  - c. The rescuer at the head slips his hands under the patient's arms and grasps the patient's wrists.
  - d. The rescuer at the patient's foot slips his hands under the patient's knees.
  - e. Both rescuers move up to a crouching position.
  - f. The rescuers stand up simultaneously and move with the patient to a stretcher.

3. Transfer of supine patient from bed to stretcher
    - a. Direct carry
        - (1) Position cot perpendicular to bed with head end of cot at foot of bed.
        - (2) Prepare cot by unbuckling straps and removing other items.
        - (3) Both rescuers stand between bed and stretcher, facing patient.
        - (4) First rescuer slides arm under patient's neck and cups patient's shoulder.
        - (5) Second rescuer slides hand under hip and lifts slightly.
        - (6) First rescuer slides other arm under patient's back.
        - (7) Second rescuer places arms underneath hips and calves.
        - (8) Rescuers slide patient to edge of bed.
        - (9) Patient is lifted/curled toward the rescuers' chests.
        - (10) Rescuers rotate and place patient gently onto cot.
    - b. Draw sheet method
        - (1) Loosen bottom sheet of bed.
        - (2) Position cot next to bed.
        - (3) Prepare cot: Adjust height, lower rails, unbuckle straps.
        - (4) Reach across cot and grasp sheet firmly at patient's head, chest, hips and knees.
        - (5) Slide patient gently onto cot.

- III. Equipment
  - A. Stretchers/cots
    - 1. Types
      - a. Wheeled stretcher
        - (1) Most commonly used device
        - (2) Rolling
          - (a) Restricted to smooth terrain.
          - (b) Foot end should be pulled.
          - (c) One person must guide the stretcher at head.
        - (3) Carrying
          - (a) Two rescuers
            - i) Preferable in narrow spaces, but requires more strength.
            - ii) Easily unbalanced.
            - iii) Rescuers should face each other from opposite ends of stretcher.
          - (b) Four rescuers
            - i) One rescuer at each corner.
            - ii) More stability and requires less strength.
            - iii) Safer over rough terrain.
        - (4) Loading into ambulance
          - (a) Use sufficient lifting power.
          - (b) Load hanging stretchers before wheeled stretchers.
          - (c) Follow manufacturer's directions.
          - (d) Ensure all cots and patients secured before moving ambulance.
      - b. Portable stretcher
      - c. Stair chair
      - d. Backboards
        - (1) Long
          - (a) Traditional wooden device
          - (b) Manufactured varieties
        - (2) Short
          - (a) Traditional wooden device
          - (b) Vest type device
      - e. Scoop or orthopedic stretcher
      - f. Flexible stretcher

    2. Maintenance - follow manufacturer's directions for inspection, cleaning, repair and upkeep.
- B. Patient positioning
    1. An unresponsive patient without suspected spine injury should be moved into the recovery position by rolling the patient onto his side (preferably the left) without twisting the body.
    2. A patient with chest pain or discomfort or difficulty breathing should sit in a position of comfort as long as hypotension is not present.
    3. A patient with suspected spine injury should be immobilized on a long backboard.
    4. A patient in shock (hypoperfusion) should have his legs elevated 8 - 12 inches.
    5. For the pregnant patient with hypotension, an early intervention is to position the patient on her left side.
    6. A patient who is nauseated or vomiting should be transported in a position of comfort; however, the EMT-Basic should be positioned appropriately to manage the airway.

## APPLICATION

### Procedural (how)

1. Show examples of proper lifting.
2. Show examples of proper carrying.
3. Show examples of proper reaching.
4. Show examples of situations where emergency moves are appropriate.
5. Show examples of situations where urgent moves are appropriate.
6. Show examples of situations where non-urgent moves are appropriate.
7. Demonstrate emergency moves.
8. Demonstrate urgent moves.
9. Demonstrate non-urgent moves.
10. Demonstrate transfer of patient to stretcher.
11. Show examples of different types of carrying devices.
12. Demonstrate knowledge of appropriate selection of each carrying device.
12. Demonstrate carrying a patient on a stretcher.
13. Demonstrate loading a patient on a stretcher into an ambulance.
14. Demonstrate use of a stair chair.
15. Demonstrate use of a scoop stretcher.

16. Demonstrate positioning patients with different conditions.
    A. Unresponsiveness
    B. Chest pain/discomfort or difficulty breathing
    C. Suspected spine injury
    D. Shock (hypoperfusion)
    E. Patients who are vomiting or nauseous
    F. Pregnant patient

Contextual (When, Where, Why)

When to transport a patient is determined by both the patient's condition and the environment in which he is found. The determination of how to transport the patient is made by considering his complaint, the severity of his condition and his location.

## STUDENT ACTIVITIES

### Auditory (Hear)

None identified for this lesson.

### Visual (See)

1. The student should see proper lifting techniques.
2. The student should see proper carrying techniques.
3. The student should see proper reaching techniques.
4. The student should see situations where emergency moves are appropriate.
5. The student should see situations where urgent moves are appropriate.
6. The student should see situations where non-urgent moves are appropriate.
7. The student should see emergency moves.
8. The student should see urgent moves.
9. The student should see non-urgent moves.
10. The student should see a patient transferred to a stretcher.
11. The student should see different types of carrying devices.
12. The student should see a patient carried on a stretcher.
13. The student should see a patient on a stretcher loaded into an ambulance.
14. The student should see a stair chair used.
15. The student should see a scoop stretcher used.
16. The student should see patients with different conditions positioned properly.
    A. Unresponsiveness
    B. Chest pain/discomfort or difficulty breathing
    C. Suspected spine injury
    D. Shock (hypoperfusion)
    E. Patients who are vomiting or nauseous

F. Pregnant patient

Kinesthetic (Do)

1. The student should practice proper lifting techniques.
2. The student should practice proper carrying techniques.
3. The student should practice proper reaching techniques.
4. The student should practice determining whether emergency, urgent or non-emergency moves are appropriate.
5. The student should practice emergency moves.
6. The student should practice urgent moves.
7. The student should practice non-urgent moves.
8. The student should practice transferring a patient to a stretcher.
9. The student should practice carrying a patient on a stretcher.
10. The student should practice loading a patient on a stretcher into an ambulance.
11. The student should practice using a stair chair.
12. The student should practice using a scoop stretcher.
13. The student should practice positioning patients with different conditions.
    A. Unresponsiveness
    B. Chest pain/discomfort or difficulty breathing
    C. Suspected spine injury
    D. Shock (hypoperfusion)
    E. Patients who are vomiting or nauseous
    F. Pregnant patients

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice, or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

G.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's guide and attach with lesson plan.

# MODULE 3

# Patient Assessment

## Lesson 3-2

## Initial Assessment

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-2.1 Summarize the reasons for forming a general impression of the patient.(C-1)
3-2.2 Discuss methods of assessing altered mental status.(C-1)
3-2.3 Differentiate between assessing the altered mental status in the adult, child and infant patient.(C-3)
3-2.4 Discuss methods of assessing the airway in the adult, child and infant patient.(C-1)
3-2.5 State reasons for management of the cervical spine once the patient has been determined to be a trauma patient.(C-1)
3-2.6 Describe methods used for assessing if a patient is breathing.(C-1)
3-2.7 State what care should be provided to the adult, child and infant patient with adequate breathing.(C-1)
3-2.8 State what care should be provided to the adult, child and infant patient without adequate breathing.(C-1)
3-2.9 Differentiate between a patient with adequate and inadequate breathing.(C-3)
3-2.10 Distinguish between methods of assessing breathing in the adult, child and infant patient.(C-3)
3-2.11 Compare the methods of providing airway care to the adult, child and infant patient.(C-3)
3-2.12 Describe the methods used to obtain a pulse.(C-1)
3-2.13 Differentiate between obtaining a pulse in an adult, child and infant patient.(C-3)
3-2.14 Discuss the need for assessing the patient for external bleeding.(C-1)

3-2.15 Describe normal and abnormal findings when assessing skin color.(C-1)
3-2.16 Describe normal and abnormal findings when assessing skin temperature.(C-1)
3-2.17 Describe normal and abnormal findings when assessing skin condition.(C-1)
3-2.18 Describe normal and abnormal findings when assessing skin capillary refill in the infant and child patient.(C-1)
3-2.19 Explain the reason for prioritizing a patient for care and transport.(C-1)

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:
3-2.20 Explain the importance of forming a general impression of the patient.(A-1)
3-2.21 Explain the value of performing an initial assessment.(A-2)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:
3-2.22 Demonstrate the techniques for assessing mental status.(P-1,2)
3-2.23 Demonstrate the techniques for assessing the airway.(P-1,2)
3-2.24 Demonstrate the techniques for assessing if the patient is breathing.(P-1,2)
3-2.25 Demonstrate the techniques for assessing if the patient has a pulse.(P-1,2)
3-2.26 Demonstrate the techniques for assessing the patient for external bleeding.(P-1,2)
3-2.27 Demonstrate the techniques for assessing the patient's skin color, temperature, condition and capillary refill (infants and children only).(P-1,2)
3-2.28 Demonstrate the ability to prioritize patients.(P-1,2)

## PREPARATION

Motivation: The EMT-Basic will encounter patients who require emergency medical care. It is important for the EMT-Basic to identify those patients who require rapid assessment critical interventions, and immediate transport.

Following the initial assessment, the EMT-B will use information obtained during this phase with the appropriate history and physical examination.

Prerequisites: BLS, Preparatory, and Airway.

## MATERIALS

AV Equipment: Utilize various audio-visual materials relating to patient assessment. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met.

EMS Equipment: Exam gloves, airway management equipment.

## PERSONNEL

Primary Instructor: One EMT-Basic instructor knowledgeable in patient assessment.

Assistant Instructor: The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable about patient assessment.

Recommended Minimum Time to Complete: One hour

## PRESENTATION

### Declarative (What)

I. General Impression of the Patient
  A. Definition
    1. The general impression is formed to determine priority of care and is based on the EMT-Basic's immediate assessment of the environment and the patient's chief complaint.
    2. Determine if ill, i.e., medical or injured (trauma). If injured, identify mechanism of injury.
    3. Age

        4. Sex
        5. Race
    B. Assess patient and determine if the patient has a life threatening condition.
        1. If a life threatening condition is found, treat immediately.
        2. Assess nature of illness or mechanism of injury.

II. Assess Patient's Mental Status. Maintain Spinal Immobilization if Needed.
    A. Begin by speaking to the patient. State name, tell the patient that you are an emergency medical technician, and explain that you are here to help.
    B. Levels of mental status
        1. Alert
        2. Responds to Verbal stimuli.
        3. Responds to Painful stimuli.
        4. Unresponsive - no gag or cough

III. Assess the Patient's Airway Status.
    A. Responsive patient - Is the patient talking or crying?
        1. If yes, assess for adequacy of breathing.
        2. If no, open airway.
    B. Unresponsive patient - Is the airway open?
        1. Open the airway. Positioning is patient, age, and size specific.
            a. For medical patients, perform the head-tilt chin-lift.
                (1) Clear
                (2) Not clear - Clear the airway.
            b. For trauma patients or those with unknown nature of illness, the cervical spine should be stabilized/immobilized and the jaw thrust maneuver performed.
                (1) Clear
                (2) Not clear - Clear the airway.

IV. Assess the Patient's Breathing.
    A. If breathing is adequate and the patient is responsive, oxygen may be indicated.
    B. All responsive patients breathing $<24$ breaths per minute or $<8$ breaths per minute should receive high flow oxygen (defined as a 15 LPM nonrebreather mask).
    C. If the patient is unresponsive and the breathing is adequate, open and maintain the airway and provide high concentration oxygen.
    D. If the breathing is inadequate, open and maintain the airway, assist the patient's breathing and utilize ventilatory adjuncts. In all cases oxygen should be used.

- E. If the patient is not breathing, open and maintain the airway and ventilate using ventilatory adjuncts. In all cases oxygen should be used.

V. Assess the Patient's Circulation.

- A. Assess the patient's pulse.
  - 1. The circulation is assessed by feeling for a radial pulse.
    - a. In a patient one year old or less, palpate a brachial pulse.
    - b. If no radial pulse is felt, palpate carotid pulse.
      - (1) If pulseless, medical patient >12 years old, start CPR and apply automated external defibrillator (AED).
      - (2) Medical patient < 12 years old, start CPR.
      - (3) Trauma patient, start CPR.
- B. Assess if major bleeding is present. If bleeding is present, control bleeding.
- C. Assess the patient's perfusion by evaluating skin color and temperature.
  - 1. The patient's skin color is assessed by looking at the nail beds, lips and eyes.
    - a. Normal - pink
    - b. Abnormal conditions
      - (1) Pale
      - (2) Cyanotic or blue-gray
      - (3) Flushed or red
      - (4) Jaundice or yellow
  - 2. Assess the patient's skin temperature by feeling the skin.
    - a. Normal - warm
    - b. Abnormal skin temperatures
      - (1) Hot
      - (2) Cool
      - (3) Cold
      - (4) Clammy - cool & moist
  - 3. Assess the patient's skin condition. This is an assessment of the amount of moisture on the skin.
    - a. Normal - dry
    - b. Abnormal - moist or wet
  - 4. Assess capillary refill in infant and child patients.
    - a. Normal capillary refill is less than two seconds.
    - b. Abnormal capillary refill is greater than two seconds.

VI. Identify Priority Patients.

- A. Consider:

        1. Poor general impression
        2. Unresponsive patients - no gag or cough
        3. Responsive, not following commands
        4. Difficulty breathing
        5. Shock (hypoperfusion)
        6. Complicated childbirth
        7. Chest pain with BP <100 systolic
        8. Uncontrolled bleeding
        9. Severe pain anywhere
    B. Expedite transport of the patient. Consider ALS back up.
VII. Proceed to the appropriate focused history and physical examination.

## APPLICATION

### Procedural (How)

1. Review airway patency, breathing and oxygen delivery.
2. Review methods of assessing mental status.
3. Demonstrate obtaining radial, carotid, and brachial pulses.
4. Show assessment and control of major external bleeding.
5. Demonstrate assessment of skin color, temperature and capillary refill.

### Contextual (When, Where, Why)

Perform initial assessment on all patients after assuring scene and personal safety. If the scene is safe and the environment permits, perform the assessment prior to moving the patient. The initial assessment is a rapid means of assessing patient condition and priorities of care.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Students should hear recordings of various patient situations to listen for clues concerning the general impression.
2. Students should hear normal and abnormal airway noises.
3. Students should hear breathing.

### Visual (See)

1. Students should see audio-visual aids or materials of various patients situations.
2. Students should see breathing while an initial assessment is being performed.

3. Students should see appropriate landmarks for assessing pulses.
4. Students should see examples of major bleeding.
5. Students should see normal skin color and condition.
6. Students should see how to control major bleeding.
7. Students should see the flow chart from Appendix I.

Kinesthetic (Do)

1. Students should practice establishing mental status on programmed patients (fellow students) with various altered mental statuses.
2. Students should practice airway opening techniques on manikins and each other.
3. Students should practice assessing breathing.
4. Students should practice assessing pulses.
5. Students should practice assessing for major bleeding.
6. Students should practice assessing skin color, temperature and condition.
7. Students should practice assessing capillary refill.
8. Students should practice recording assessment findings.
9. Students should use the flow chart from Appendix I.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 3

# Patient Assessment

## Lesson 3-3

## Focused History and Physical Exam: Trauma

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-3.1 Discuss the reasons for reconsideration concerning the mechanism of injury.(C-1)
3-3.2 State the reasons for performing a rapid trauma assessment.(C-1)
3-3.3 Recite examples and explain why patients should receive a rapid trauma assessment.(C-1)
3-3.4 Describe the areas included in the rapid trauma assessment and discuss what should be evaluated.(C-1)
3-3.5 Differentiate when the rapid assessment may be altered in order to provide patient care. (C-3)
3-3.6 Discuss the reason for performing a focused history and physical exam.(C-1)

### AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-3.7 Recognize and respect the feelings that patients might experience during assessment.(A-1)

### PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-3.8 Demonstrate the rapid trauma assessment that should be used to assess a patient based on mechanism of injury.(P-1,2)

## PREPARATION

| | |
|---|---|
| Motivation: | With trauma patients, it is important for the EMT-Basic student to separate those patients who require rapid assessment and critical interventions, from those patients who can be managed using components of the focused assessment. |
| Prerequisite Skills: | BLS, Preparatory, and Airway. |

## MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to the history and physical exam of trauma patients. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met. |
| EMS Equipment: | Exam gloves, stethoscope (dual and single head)(1:6), blood pressure cuffs (adult, child and infant)(1:6), penlight (1:6). |

## PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor, knowledgeable in patient assessment. |
| Assistant Instructor: | The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in assessing the history and physical exam of the trauma patient. |
| Recommended Minimum Time to Complete: | Four hours |

## PRESENTATION

Declarative (What)

- I. Re-consider Mechanism of Injury
  - A. Significant mechanism of injury
    - 1. Ejection from vehicle
    - 2. Death in same passenger compartment
    - 3. Falls > 20 feet
    - 4. Roll-over of vehicle
    - 5. High-speed vehicle collision
    - 6. Vehicle-pedestrian collision
    - 7. Motorcycle crash
    - 8. Unresponsive or altered mental status
    - 9. Penetrations of the head, chest, or abdomen
    - 10. Hidden injuries
      - a. Seat belts
        - (1) If buckled, may have produced injuries.
        - (2) If patient had seat belt on, it does not mean they do not have injuries.
      - b. Airbags
        - (1) May not be effective without seat belt.
        - (2) Patient can hit wheel after deflation.
        - (3) Lift the deployed airbag and look at the steering wheel for deformation.
          - (a) "Lift and look" under the bag after the patient has been removed.
          - (b) Any visible deformation of the steering wheel should be regarded as an indicator of potentially serious internal injury, and appropriate action should be taken.
  - B. Infant and child considerations
    - 1. Falls >10 feet
    - 2. Bicycle collision
    - 3. Vehicle in medium speed collision
- II. Perform rapid trauma assessment on patients with significant mechanism of injury to determine life threatening injuries. In the responsive patient, symptoms should be sought before and during the trauma assessment.
  - A. Continue spinal stabilization.
  - B. Consider ALS request.

C. Reconsider transport decision.
D. Assess mental status.
E. As you inspect and palpate, look and feel for the following examples of injuries or signs of injury:
  1. Deformities
  2. Contusions
  3. Abrasions
  4. Punctures/penetrations
  5. Burns
  6. Tenderness
  7. Lacerations
  8. Swelling
F. Assess the head, inspect and palpate for injuries or signs of injury.
  1. Deformities
  2. Contusions
  3. Abrasions
  4. Punctures/penetrations
  5. Burns
  6. Tenderness
  7. Lacerations
  8. Swelling
  9. Crepitation
G. Assess the neck, inspect and palpate for injuries or signs of injury.
  1. Deformities
  2. Contusions
  3. Abrasions
  4. Punctures/penetrations
  5. Burns
  6. Tenderness
  7. Lacerations
  8. Swelling
  9. Jugular vein distension (JVD)
  10. Crepitation
H. Apply cervical spinal immobilization collar (CSIC). May use information from the head injury lesson at this time.
I. Assess the chest, inspect and palpate for:
  1. Injuries or signs of injury
  2. Deformities
  3. Contusions
  4. Abrasions
  5. Punctures/penetrations

    6. Burns
    7. Tenderness
    8. Lacerations
    9. Swelling
    10. Paradoxical motion
    11. Crepitation
    12. Breath sounds in the apices, mid-clavicular line, bilaterally and at the bases, mid-axillary line, bilaterally
        a. Present
        b. Absent
        c. Equal

J. Assess the abdomen, inspect and palpate for injuries or signs of injury.
    1. Deformities
    2. Contusions
    3. Abrasions
    4. Punctures/penetrations
    5. Burns
    6. Tenderness
    7. Lacerations
    8. Swelling
    9. Firm
    10. Soft
    11. Distended

K. Assess the pelvis, inspect and palpate for injuries or signs of injury.
    1. Deformities
    2. Contusions
    3. Abrasions
    4. Punctures/penetrations
    5. Burns
    6. Tenderness
    7. Lacerations
    8. Swelling
    9. If no pain is noted, gently compress the pelvis to determine tenderness or motion.

L. Assess all four extremities, inspect and palpate for injuries or signs of injury.
    1. Deformities
    2. Contusions
    3. Abrasions
    4. Punctures/penetrations

        5. Burns
        6. Tenderness
        7. Lacerations
        8. Swelling
        9. Distal pulse
        10. Sensation
        11. Motor function
    M. Roll patient with spinal precautions and assess posterior body, inspect and palpate, examining for injuries or signs of injury.
    N. Assess baseline vital signs.
    O. Assess SAMPLE history.

III. For patients with no significant mechanism of injury, e.g., cut finger
    A. Perform focused history and physical exam of injuries based on the components of the rapid assessment. The focused assessment is performed on the specific injury site.
    B. Assess baseline vital signs.
    C. Assess SAMPLE history.

## APPLICATION

### Procedural (How)

The assessment is completed by visually inspecting, physically palpating and auscultating, and verbally communicating with the patient and family. The assessment is an input/output process, where the assessment findings are the input and the treatment is the output.

1. Review of scene size-up.
2. Review of the initial assessment.
3. Students should be shown audio-visual aids or materials of various trauma scenes to evaluate the mechanism of injury.
4. Demonstrate a rapid patient assessment.

### Contextual (When, Where, Why)

The history and physical exam are performed following the initial assessment and correction of immediate threats to life. During this process, obtain additional information regarding the patient's condition.

This assessment may be performed at the same location as the initial assessment, unless the scene or patient's condition requires movement.

This assessment is the second hands-on approach to gain information to continue providing patient care, managing life threats, and making a transport decision.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Students should hear information input from a simulated patient or others regarding signs and symptoms for patients that are unresponsive.
2. Students should hear the presence of breath sounds on fellow students.

### Visual (See)

1. Students should see audio-visual aids or materials of various injuries.
2. Students should see the inspection and palpation of programmed patients for various injuries and patterns of injury.
3. Students should see landmarks for auscultation of breath sounds.
4. Students should see landmarks for palpation and inspection.
5. Students should see the sizing and application of cervical spine immobilization devices.
6. Students should see how the pupils of the eye normally react to light.
7. Students should see the flow chart from Appendix I.

### Kinesthetic (Do)

1. Students should practice performing the skills of inspection, palpation, and auscultation.
2. Students should practice measuring and applying cervical spine immobilization devices.
3. Students should practice recording assessment findings for a trauma patient.
4. Students should use the flow chart from Appendix I.
5. The student should practice doing the focused history and physical exam learned in this lesson.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 3

# Patient Assessment

## Lesson 3-5

## Detailed Physical Exam

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-5.1 Discuss the components of the detailed physical exam.(C-1)
3-5.2 State the areas of the body that are evaluated during the detailed physical exam.(C-1)
3-5.3 Explain what additional care should be provided while performing the detailed physical exam.(C-1)
3-5.4 Distinguish between the detailed physical exam that is performed on a trauma patient and that of the medical patient.(C-3)

### AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-5.5 Explain the rationale for the feelings that these patients might be experiencing.(A-3)

### PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-5.6 Demonstrate the skills involved in performing the detailed physical exam.(P-1,2)

## PREPARATION

Motivation: The entire basis for the EMT-Basic's emergency medical care is the assessment findings. In the detailed physical exam, the EMT-Basic will continue to assess the patient, allowing for continued care.

Prerequisites: BLS, Preparatory and Airway.

### MATERIALS

AV Equipment: Utilize various audio-visual materials relating to the detailed physical exam. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met.

EMS Equipment: Exam gloves, stethoscope (dual and single head)(1:6), blood pressure cuffs (adult, child and infant)(1:6), penlight (1:6).

### PERSONNEL

Primary Instructor: One EMT-Basic instructor with knowledge in patient assessment.

Assistant Instructor: The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in assessing a detailed physical exam.

Recommended Minimum Time to Complete: One hour

## PRESENTATION

### Declarative (What)

I. Detailed Physical Exam
  A. Patient and injury specific, e.g., cut finger would not require the detailed physical exam.
  B. Perform a detailed physical examination on the patient to gather additional information.
    1. As you inspect and palpate, look and/or feel for the following examples of injuries or signs of injury:
      a. Deformities
      b. Contusions
      c. Abrasions
      d. Punctures/penetrations
      e. Burns
      f. Tenderness
      g. Lacerations
      h. Swelling
    2. Assess the head, inspect and palpate for injuries or signs of injury.
      a. Deformities
      b. Contusions
      c. Abrasions
      d. Punctures/penetrations
      e. Burns
      f. Tenderness
      g. Lacerations
      h. Swelling
    3. Assess the face, inspect and palpate for injuries or signs of injury.
      a. Deformities
      b. Contusions
      c. Abrasions
      d. Punctures/penetrations
      e. Burns
      f. Tenderness
      g. Lacerations
      h. Swelling

4. Assess the ears, inspect and palpate for injuries or signs of injury .
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Drainage
5. Assess the eyes, inspect for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Discoloration
    j. Unequal pupils
    k. Foreign bodies
    l. Blood in anterior chamber
6. Assess the nose, inspect and palpate for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Drainage
    j. Bleeding
7. Assess the mouth, inspect for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations

  - e. Burns
  - f. Tenderness
  - g. Lacerations
  - h. Swelling
  - i. Teeth
  - j. Obstructions
  - k. Swollen or lacerated tongue
  - l. Odors
  - m. Discoloration

8. Assess the neck, inspect and palpate for injuries or signs of injury.
   - a. Deformities
   - b. Contusions
   - c. Abrasions
   - d. Punctures/penetrations
   - e. Burns
   - f. Tenderness
   - g. Lacerations
   - h. Swelling
   - i. Jugular vein distension
   - j. Crepitance
9. Assess the chest, inspect and palpate for injuries or signs of injury.
   - a. Deformities
   - b. Contusions
   - c. Abrasions
   - d. Punctures/penetrations
   - e. Burns
   - f. Tenderness
   - g. Lacerations
   - h. Swelling
   - i. Crepitance
   - j. Paradoxical motion
   - k. Breath sounds in the apices, mid-clavicular line, bilaterally and at the bases, mid-axillary line, bilaterally.
     - (1) Present
     - (2) Absent
     - (3) Equal
10. Assess the abdomen, inspect and palpate for injuries or signs of injury.
    - a. Deformities

   - b. Contusions
   - c. Abrasions
   - d. Punctures/penetrations
   - e. Burns
   - f. Tenderness
   - g. Lacerations
   - h. Swelling
   - i. Firm
   - j. Soft
   - k. Distended

11. Assess the pelvis, inspect and palpate for injuries or signs of injury.
    - a. Deformities
    - b. Contusions
    - c. Abrasions
    - d. Punctures/penetrations
    - e. Burns
    - f. Tenderness
    - g. Lacerations
    - h. Swelling
    - i. If the patient does not complain of pain or is unresponsive, gently flex and compress the pelvis to determine stability.
12. Assess all four extremities, inspect and palpate for injuries or signs of injury.
    - a. Deformities
    - b. Contusions
    - c. Abrasions
    - d. Punctures/penetrations
    - e. Burns
    - f. Tenderness
    - g. Lacerations
    - h. Swelling
    - i. Distal pulses
    - j. Sensation
    - k. Motor function
13. Roll with spinal precautions and assess posterior aspect of body, inspect and palpate for injuries or signs of injury.
    - a. Deformities
    - b. Contusions
    - c. Abrasions

   d. Punctures/penetrations
   e. Burns
   f. Tenderness
   g. Lacerations
   h. Swelling

II. Assess Baseline Vital Signs.

## APPLICATION

### Procedural (How)

The physical assessment is completed by visual inspection and palpation. The assessment is an input/output process, where the assessment findings are the input and the treatment is the output.

### Contextual (When, Where, Why)

The detailed physical exam is performed following the focused history and physical exam. It will be performed after all critical interventions have been completed. It is situation and time dependent. Depending upon the severity of the patient's injury or illness, this assessment may not be completed. During this process, additional information regarding the patient's condition is obtained.

Typically this assessment will be performed while en route to the receiving facility.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Students should hear information (clues) from the responsive or altered mental status patient regarding symptoms.

### Visual (See)

1. Students should see audio-visual aids or materials of various injuries.
2. Students should see the inspection and palpation of programmed patients for various injuries and illnesses.
3. Students should see landmarks for auscultation of breath sounds.
4. Students should see landmarks for palpation and inspection.
5. Students should see the flow chart from Appendix I.

### Kinesthetic (Do)

1. Students should practice performing the skills of inspection, palpation, and auscultation of the detailed physical exam.
2. Students should use the flow chart from Appendix I.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 3

## Patient Assessment

## Lesson 3-7

## Communications

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-7.1 List the proper methods of initiating and terminating a radio call.(C-1)
3-7.2 State the proper sequence for delivery of patient information.(C-1)
3-7.3 Explain the importance of effective communication of patient information in the verbal report.(C-1)
3-7.4 Identify the essential components of the verbal report.(C-1)
3-7.5 Describe the attributes for increasing effectiveness and efficiency of verbal communications.(C-1)
3-7.6 State legal aspects to consider in verbal communication.(C-1)
3-7.7 Discuss the communication skills that should be used to interact with the patient.(C-1)
3-7.8 Discuss the communication skills that should be used to interact with the family, bystanders, individuals from other agencies while providing patient care and the difference between skills used to interact with the patient and those used to interact with others.(C-1)
3-7.9 List the correct radio procedures in the following phases of a typical call:(C-1)

- To the scene.
- At the scene.
- To the facility.
- At the facility.
- To the station.
- At the station.

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-7.10 Explain the rationale for providing efficient and effective radio communications and patient reports.(A-3)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-7.11 Perform a simulated, organized, concise radio transmission.(P-2)

3-7.12 Perform an organized, concise patient report that would be given to the staff at a receiving facility.(P-2)

3-7.13 Perform a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT-Basic was already providing care.(P-2)

## PREPARATION

| | |
|---|---|
| Motivation: | The best prehospital patient care may come to an end at the door of the Emergency Department (ED) if a patient's condition is not described well enough for the ED staff to prepare.<br>Communication is an essential component of prehospital care. Both verbal and written communications will be used during every response. Patient care not only includes assessment and treatment, but the ability to effectively and efficiently communicate findings to other health care providers. |
| Prerequisites: | BLS, Preparatory and Airway. |

## MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to communications. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met. |
| EMS Equipment: | None |

## PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in this area. |
| Assistant Instructor: | The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in communications. |
| Recommended Minimum Time to Complete: | One hour |

## PRESENTATION

### Declarative (What)

I. Communication
   A. Communication system
      1. System components
         a. Base station - a radio which is located at a stationary site such as a hospital, mountain top, or public safety agency.
         b. Mobile two-way radios (transmitter/receivers)
            (1) Implies a vehicular mounted device.
            (2) Mobile transmitters usually transmit at lower power than base stations (typically 20 - 50 watts).
            (3) Typical transmission range is 10 - 15 miles over average terrain.
         c. Portable radios (transmitter/receivers)
            (1) Implies a handheld device.
            (2) Typically have power output of 1 - 5 watts, limiting their range.
         d. Repeater/base station - receives a transmission from a low-power portable or mobile radio on one frequency and retransmits at a higher power on another frequency.
         e. Digital radio equipment
         f. Cellular telephones
      2. Radio communications
         a. Radio frequencies - assigned and licensed by the Federal Communication Commission (FCC).

- b. Response to the scene
    - (1) The dispatcher needs to be notified that the call was received.
    - (2) Dispatch needs to know that the unit is en route.
    - (3) Other agencies should be notified as appropriate, e.g., local hospital.
- c. Arrival at the scene - the dispatcher must be notified.

3. Communication with medical direction
    - a. In some systems, medical direction is at the receiving facility. In others, medical direction is at a separate site.
    - b. In either case, EMT-Basics may need to contact medical direction for consultation and to get orders for administration of medications. Radio transmissions need to be organized, concise and pertinent.
    - c. Since the physician will determine whether to order medications and procedures based on the information given by the EMT-Basic, this information must be accurate.
    - d. After receiving an order for a medication or procedure (or denial of such a request), repeat the order back word for word.
    - e. Orders that are unclear or appear to be inappropriate should be questioned.
    - f. Communication with receiving facilities
    - g. EMT-Basics provide information that allows hospitals to prepare for a patient's arrival by having the right room, equipment and personnel prepared.
    - h. Patient reporting concepts
        - (1) When speaking on the radio, keep these principles in mind:
            - (a) Radio is on and volume is properly adjusted.
            - (b) Listen to the frequency and ensure it is clear before beginning a transmission.
            - (c) Press the "press to talk" (PTT) button on the radio and wait for one second before speaking.
            - (d) Speak with lips about 2 to 3 inches from the microphone.
            - (e) Address the unit being called, then give the name of the unit (and number if appropriate) where the transmission is originating from.

(f) The unit being called will signal that the transmission should start by saying "go ahead" or some other term standard for that area. A response of "stand by" means wait until further notice.

(g) Speak clearly and slowly, in a monotone voice.

(h) Keep transmissions brief. If, on occasion, a transmission takes longer than 30 seconds, stop at that point and pause for a few seconds so that emergency traffic can use the frequency if necessary.

(i) Use clear text.

(j) Avoid codes.

(k) Avoid meaningless phrases like "Be advised."

(l) Courtesy is assumed, so there is no need to say "please," "thank you" and "you're welcome."

(m) When transmitting a number that might be confused (e.g., a number in the teens), give the number, then give the individual digits.

(n) The airwaves are public and scanners are popular. EMS transmissions may be overheard by more than just the EMS community. Do not give a patient's name over the air.

(o) For the same reason, be careful to remain objective and impartial in describing patients. An EMT-Basic may be sued for slander if he injures someone's reputation in this way.

(p) An EMT-Basic rarely acts alone: Use "we" instead of "I."

(q) Do not use profanity on the air. The FCC takes a dim view of such language and may impose substantial fines.

(r) Avoid words that are difficult to hear like "yes" and "no." Use "affirmative" and "negative."

- (s) Use the standard format for transmission of information.
- (t) When the transmission is finished, indicate this by saying "over." Get confirmation that the message was received.
- (u) Avoid codes, especially those that are not standardized.
- (v) Avoid offering a diagnosis of the patient's problem.
- (w) Use EMS frequencies only for EMS communication.
- (x) Reduce background noise as much as possible by closing the window.

(2) Notify the dispatcher when the unit leaves the scene.

(3) When communicating with medical direction or the receiving facility, a verbal report should be given. The essential elements of such a report, in the order they should be given, are:

- (a) Identify unit and level of provider (who and what)
- (b) Estimated time of arrival
- (c) Patient's age and sex
- (d) Chief complaint
- (e) Brief, pertinent history of the present illness
- (f) Major past illnesses
- (g) Mental status
- (h) Baseline vital signs
- (i) Pertinent findings of the physical exam
- (j) Emergency medical care given
- (k) Response to emergency medical care

(4) After giving this information, the EMT-Basic will continue to assess the patient. Additional vital signs may be taken and new information may become available, particularly on long transports. In some systems, this information should be relayed to the hospital (see local protocol). Information that must be transmitted includes deterioration in the patient's condition.

(5) Arrival at the hospital

- (a) The dispatcher must be notified.

            (b) In some systems, the hospital should also be notified.
        (6) Leaving the hospital for the station - the dispatcher should be notified.
        (7) Arrival at the station - the dispatcher should be notified.
  4. System maintenance
    a. Communication equipment needs to be checked periodically by a qualified technician, e.g., to ensure that a radio is not drifting from its assigned frequency.
    b. As technology changes, new equipment becomes available that may have a role in EMS systems, e.g., cellular phones.
    c. Since EMT-Basics may need to be able to consult on-line medical direction, an EMS system must provide a back-up in case the usual procedures do not work.
B. Verbal communication
  1. After arrival at the hospital, give a verbal report to the staff.
    a. Introduce the patient by name (if known).
    b. Summarize the information given over the radio:
      (1) Chief complaint
      (2) History that was not given previously
      (3) Additional treatment given en route
      (4) Additional vital signs taken en route
    c. Give additional information that was collected but not transmitted.
C. Written communication - this is covered in the lesson on documentation.
D. Interpersonal communication
  1. Make and keep eye contact with the patient.
  2. When practical, position yourself at a level lower than the patient.
  3. Be honest with the patient.
  4. Use language the patient can understand.
  5. Be aware of your own body language.
  6. Speak clearly, slowly and distinctly.
  7. Use the patient's proper name, either first or last, depending on the circumstances. Ask the patient what he wishes to be called.
  8. If a patient has difficulty hearing, speak clearly with lips visible.

        9. Allow the patient enough time to answer a question before asking the next one.
        10. Act and speak in a calm, confident manner.
    E. Communication with hearing impaired, non-English speaking populations, use of interpreters, etc.
    F. Communication with elderly
        1. Potential for visual deficit
        2. Potential for auditory deficit

## APPLICATION

### Procedural (How)

1. Show how to initiate and terminate a radio call.
2. Demonstrate use of the radio in the different phases of a typical call.
    - To the scene.
    - At the scene.
    - To the facility.
    - At the facility.
    - To the station.
    - At the station.
3. Demonstrate the proper sequence of patient information.
4. Demonstrate how to communicate with a patient.
5. Demonstrate how to communicate with a patient's family.
6. Demonstrate how to communicate with bystanders.
7. Demonstrate how to communicate with individuals from other agencies while providing patient care.
8. Demonstrate a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT-Basic was already providing care.
9. Demonstrate a simulated, organized, concise radio transmission.

### Contextual (When, Where, Why)

Communications occur from the pre-dispatch phase, throughout the call, and well after the completion of the transport. Various individuals will be involved in the verbal communication process and vital information will be discussed. The EMT-Basic must have excellent verbal and written communication skills to assure accurate information is delivered to the appropriate individuals. The continuum of patient care is based upon effective and efficient communication skills.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. The student should hear both sides of a radio transmission during the phases of a typical call:
    - To the scene.
    - At the scene.
    - To the facility.
    - At the facility.
    - To the station.
    - At the station.
2. The student should hear initiation and termination of a radio call.
3. The student should hear patient information delivered in the proper sequence.
4. The student should hear communication with a simulated patient.
5. The student should hear communication with the family of a simulated patient.
6. The student should hear communication with simulated bystanders.
7. The student should hear communication with individuals from other agencies at a call.
8. The student should hear a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT-Basic was already providing care.

### Visual (See)

1. The student should see examples of portable, mobile and base station radio equipment.
2. The student should see the communication skills used to interact with the family.
3. The student should see the communication skills used to interact with bystanders.
4. The student should see the communication skills used to interact with individuals from other agencies while providing patient care.
5. The student should see the components of the minimum data set.

### Kinesthetic (Do)

1. The student should practice radio use procedures in the following phases of a typical call:
    - To the scene.
    - At the scene.
    - To the facility.
    - At the facility.

  - To the station.
  - At the station.

2. The student should practice the proper methods of initiating and terminating a radio call.
3. The student should practice the proper sequence of delivery of patient information.
4. The student should practice the communication skills used to interact with the patient.
5. The student should practice the communication skills used to interact with the family.
6. The student should practice the communication skills used to interact with bystanders.
7. The student should practice the communication skills used to interact with individuals from other agencies while providing patient care.
8. The student should practice performing an organized, concise patient report that would be given to the medical staff at a receiving facility.
9. The student should practice performing a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT-Basic was already providing care.
10. The student should practice performing a simulated, organized, concise radio transmission.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 4

# Medical/Behavioral and Obstetrics/Gynecology

## Lesson 4-6

## Poisoning/ Overdose

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

4-6.1 List various ways that poisons enter the body.(C-1)
4-6.2 List signs/symptoms associated with poisoning.(C-1)
4-6.3 Discuss the emergency medical care for the patient with possible overdose.(C-1)
4-6.4 Describe the steps in the emergency medical care for the patient with suspected poisoning.(C-1)
4-6.5 Establish the relationship between the patient suffering from poisoning or overdose and airway management.(C-3)
4-6.6 State the generic and trade names, indications, contraindications, medication form, dose, administration, actions, side effects and re-assessment strategies for activated charcoal.(C-1)
4-6.7 Recognize the need for medical direction in caring for the patient with poisoning or overdose.(C-3)

### AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

4-6.8 Explain the rationale for administering activated charcoal.(A-3)
4-6.9 Explain the rationale for contacting medical direction early in the prehospital management of the poisoning or overdose patient.(A-3)

### PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

4-6.10 Demonstrate the steps in the emergency medical care for the patient with possible overdose.(P-1,2)

4-6.11 Demonstrate the steps in the emergency medical care for the patient with suspected poisoning.(P-1,2)

4-6.12 Perform the necessary steps required to provide a patient with activated charcoal.(P-2)

4-6.13 Demonstrate the assessment and documentation of patient response.(P-1,2)

4-6.14 Demonstrate proper disposal of the equipment for the administration of activated charcoal.(P-1,2)

4-6.15 Demonstrate completing a prehospital care report for patients with a poisoning/overdose emergency.(P-1,2)

## PREPARATION

| | |
|---|---|
| Motivation: | Thousands of children are poisoned every year as they explore their environments. Many adults also overdose on medication, either accidentally or deliberately. With early prehospital management, the vast majority of these patients have better outcomes. |
| Prerequisites: | BLS, Preparatory, Airway and Patient Assessment. |

### MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to poisoning/overdose emergencies. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure meeting the objectives of the curriculum. |
| EMS Equipment: | Activated charcoal, suction equipment. |

### PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in this area. |
| Assistant Instructor: | None required. |
| Recommended Minimum Time to Complete: | Two hours |

## PRESENTATION

### Declarative (What)

I. Emergency Medical Care of Poisoning/Overdose
  A. Important questions to consider asking patient
    1. What substance
    2. When did you ingest/become exposed
    3. If an ingestion, how much did you ingest
    4. Over what time period
    5. Interventions
    6. How much do you weigh
  B. Ingested
    1. Signs and symptoms
      a. History of ingestion
      b. Nausea
      c. Vomiting
      d. Diarrhea
      e. Altered mental status
      f. Abdominal pain
      g. Chemical burns around the mouth
      h. Different breath odors
    2. Emergency medical care
      a. Remove pills, tablets or fragments with gloves from patient's mouth, as needed, without injuring oneself.
      b. Consult medical direction - activated charcoal.
      c. Bring all containers, bottles, labels, etc. of poison agents to receiving facility.
  C. Inhaled
    1. Signs and symptoms
      a. History of inhalation of toxic substance
      b. Difficulty breathing
      c. Chest pain
      d. Cough
      e. Hoarseness
      f. Dizziness
      g. Headache
      h. Confusion
      i. Seizures
      j. Altered mental status

- 2. Emergency medical care
    - a. Have trained rescuers remove patient from poisonous environment.
    - b. Give oxygen, if not already done in the initial assessment.
    - c. Bring all containers, bottles, labels, etc. of poison agents to receiving facility.
- D. Toxic injection
    - 1. Signs and symptoms
        - a. Weakness
        - b. Dizziness
        - c. Chills
        - d. Fever
        - e. Nausea
        - f. Vomiting
    - 2. Emergency medical care
        - a. Airway and oxygen.
        - b. Be alert for vomiting.
        - c. Bring all containers, bottles, labels, etc. of poison agents to receiving facility.
- E. Absorbed
    - 1. Signs and symptoms
        - a. History of exposure
        - b. Liquid or powder on patient's skin
        - c. Burns
        - d. Itching
        - e. Irritation
        - f. Redness
    - 2. Emergency medical care
        - a. Skin - remove contaminated clothing while protecting oneself from contamination.
            - (1) Powder - brush powder off patient, then continue as for other absorbed poisons.
            - (2) Liquid - irrigate with clean water for at least 20 minutes (and continue en route to facility if possible).
        - b. Eye - irrigate with clean water away from affected eye for at least 20 minutes and continue en route to facility if possible.

- II. Relationship to Airway Management
    - A. Use information and skills learned in airway section of course to manage airway difficulties.

B. A patient's condition may deteriorate, so continue to assess patient for airway difficulties and manage as learned previously.

III. Medications
  A. Activated charcoal
    1. Medication name
      a. Generic - Activated charcoal
      b. Trade
        (1) SuperChar™
        (2) InstaChar™
        (3) Actidose™
        (4) LiquiChar™
        (5) Others
    2. Indications - poisoning by mouth
    3. Contraindications
      a. Altered mental status
      b. Ingestion of acids or alkalis
      c. Unable to swallow
    4. Medication form
      a. Pre-mixed in water, frequently available in plastic bottle containing 12.5 grams activated charcoal.
      b. Powder - should be avoided in field.
    5. Dosage
      a. Adults and children: 1 gram activated charcoal/kg of body weight.
      b. Usual adult dose: 25 - 50 grams
      c. Usual infant/child dose: 12.5 - 25 grams
    6. Administration
      a. Obtain order from medical direction either on-line or off-line.
      b. Container must be shaken thoroughly.
      c. Since medication looks like mud, patient may need to be persuaded to drink it.
      d. A covered container and a straw may improve patient compliance since the patient cannot see the medication this way.
      e. If patient takes a long time to drink the medication, the charcoal will settle and will need to be shaken or stirred again.
      f. Record activity and time.
    7. Actions

- a. Binds to certain poisons and prevents them from being absorbed into the body.
- b. Not all brands of activated charcoal are the same; some bind much more poison than others, so consult medical direction about the brand to use.

8. Side effects
    - a. Black stools
    - b. Some patients, particularly those who have ingested poisons that cause nausea, may vomit.
    - c. If the patient vomits, the dose should be repeated once.
9. Re-assessment strategies - the EMT-Basic should be prepared for the patient to vomit or further deteriorate.

## APPLICATION

### Procedural (How)

1. Show the student examples of poisoning by ingestion.
2. Show the student examples of poisoning by inhalation.
3. Show the student examples of poisoning by injection.
4. Show the student examples of poisoning by absorption.
5. Show the student activated charcoal.
6. Show the student how to administer activated charcoal.
7. Show the student how to care for a patient with suspected poisoning or overdose.

### Contextual (When, Where, Why)

The EMT-Basic can prevent injury and illness from ingested poisoning by administering activated charcoal. The sooner this happens, the more effect it will have. The EMT-Basic can also prevent loss of life by ensuring the patient who has overdosed has his airway protected.

## STUDENT ACTIVITIES

### Auditory (Hear)

None identified for this lesson.

### Visual (See)

1. The student should see audio-visuals aids or materials of examples of poisoning by ingestion.

2. The student should see audio-visuals aids or materials of examples of poisoning by inhalation.
3. The student should see audio-visuals aids or materials of examples of poisoning by injection.
4. The student should see audio-visuals aids or materials of examples of poisoning by absorption.
5. The student should see activated charcoal.
6. The student should see a demonstration of how to administer activated charcoal.
7. The student should see a demonstration of how to care for a patient with suspected poisoning or overdose.

Kinesthetic (Do)

1. The student should practice caring for a patient with suspected poisoning or overdose.
2. The student should practice the assessment and documentation of patient response to activated charcoal.
3. The student should practice completing a prehospital care report for patients with poisoning/overdose emergencies.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan. If there are local resources, for example, Poison Control Centers, utilize them.

# MODULE 5

## Trauma

## Lesson 5-1

## Bleeding and Shock

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-1.1 List the structure and function of the circulatory system.(C-1)
5-1.2 Differentiate between arterial, venous and capillary bleeding.(C-3)
5-1.3 State methods of emergency medical care of external bleeding.(C-1)
5-1.4 Establish the relationship between body substance isolation and bleeding.(C-3)
5-1.5 Establish the relationship between airway management and the trauma patient.(C-3)
5-1.6 Establish the relationship between mechanism of injury and internal bleeding.(C-3)
5-1.7 List the signs of internal bleeding.(C-1)
5-1.8 List the steps in the emergency medical care of the patient with signs and symptoms of internal bleeding.(C-1)
5-1.9 List signs and symptoms of shock (hypoperfusion).(C-1)
5-1.10 State the steps in the emergency medical care of the patient with signs and symptoms of shock (hypoperfusion).(C-1)

### AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-1.11 Explain the sense of urgency to transport patients that are bleeding and show signs of shock (hypoperfusion).(A-1)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-1.12 Demonstrate direct pressure as a method of emergency medical care of external bleeding. (P-1,2)
5-1.13 Demonstrate the use of diffuse pressure as a method of emergency medical care of external bleeding.(P-1,2)
5-1.14 Demonstrate the use of pressure points and tourniquets as a method of emergency medical care of external bleeding.(P-1,2)
5-1.15 Demonstrate the care of the patient exhibiting signs and symptoms of internal bleeding.(P-1,2)
5-1.16 Demonstrate the care of the patient exhibiting signs and symptoms of shock (hypoperfusion).(P-1,2)
5-1.17 Demonstrate completing a prehospital care report for patient with bleeding and/or shock (hypoperfusion).(P-2)

## PREPARATION

Motivation: Trauma is the leading cause of death in the United States for persons between the ages of 1 and 44. Understanding the mechanism of injury and relevant signs and symptoms of bleeding and shock (hypoperfusion) is of paramount importance when dealing with the traumatized patient.

Prerequisites: BLS, Preparatory, Airway and Patient Assessment.

## MATERIALS

AV Equipment: Utilize various audio-visual materials relating to bleeding and shock (hypoperfusion). The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure meeting the objectives of the curriculum.

EMS Equipment: Sterile dressings, bandages, splints, pneumatic antishock garment, triangular bandage, stick or rod, air splints, gloves, eye protection, blanket.

## PERSONNEL

Primary Instructor: One EMT-Basic instructor knowledgeable in bleeding and shock (hypoperfusion).

Assistant Instructor: The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in bleeding and shock.

Recommended Minimum Time to Complete: Two hours

## PRESENTATION

Declarative (What)

I. Circulatory (Cardiovascular) System Review
  A. Anatomy review
    1. Heart
    2. Arteries
    3. Capillaries
    4. Veins
    5. Blood
    6. Physiology
    7. Perfusion
      a. Definition - circulation of blood through an organ structure.
      b. Perfusion delivers oxygen and other nutrients to the cells of all organ systems and the removes waste products.
      c. Hypoperfusion is the inadequate circulation of blood through an organ.

II. External Bleeding
  A. Body substance isolation must be routinely taken to avoid skin and mucous membrane exposure to body fluids.
    1. Eye protection
    2. Gloves
    3. Gown
    4. Mask
    5. Hand washing following each run.

611

B. Severity
  1. The sudden loss of one liter (1000cc) of blood in the adult patient, 1/2 liter (500cc) of blood in the child, and 100 - 200cc of the blood volume in an infant is considered serious. (For example, a one year old only has 800cc of blood, therefore 150cc is a major blood loss).
  2. The severity of blood loss must be based on the patient's signs and symptoms and the general impression of the amount of blood loss. If the patient exhibits signs and symptoms of shock (hypoperfusion), the bleeding is to be considered serious.
  3. The natural response to bleeding is blood vessel contractions and clotting; however, a serious injury may prevent effective clotting from occurring.
  4. Uncontrolled bleeding or significant blood loss leads to shock (hypoperfusion) and possibly death.

C. Types of bleeding
  1. Arterial
    a. The blood spurts from the wound.
    b. Bright, red, oxygen rich blood.
    c. Arterial bleeding is the most difficult to control because of the pressure at which arteries bleed.
    d. As the patient's blood pressure drops, the amount of spurting may also drop.
  2. Venous
    a. The blood flows as a steady stream.
    b. Dark, oxygen poor blood.
    c. Bleeding from a vein can be profuse; however, in most cases it is easier to control due to the lower venous pressure.
  3. Capillary
    a. The blood oozes from a capillary and is dark red in color.
    b. The bleeding often clots spontaneously.

D. Emergency medical care of external bleeding
  1. Body substance isolation
  2. Maintain airway/artificial ventilation.
  3. Bleeding control
    a. Apply finger tip pressure directly on the point of bleeding.
    b. Elevation of a bleeding extremity may be used secondary to and in conjunction with direct pressure.

c. Large gaping wounds may require packing with sterile gauze and direct hand pressure if direct finger tip pressure fails to control bleeding.
d. If bleeding does not stop, remove dressing and assess for bleeding point to apply direct pressure. If diffuse bleeding is discovered, apply additional pressure.
e. Pressure points may be used in upper and lower extremities.

4. Methods to control external bleeding if direct pressure fails
    a. Splints
        (1) Reduction of motion of bone ends will reduce the amount and aggravation of tissue damage and bleeding associated with a fracture.
        (2) Splinting may allow prompt control of bleeding associated with a fracture.
    b. Pressure Splints
        (1) The use of air pressure splints can help control severe bleeding associated with lacerations of soft tissue or when bleeding is associated with fractures.
        (2) Pneumatic counterpressure devices (pneumatic antishock garment) can be used as an effective pressure splint to help control severe bleeding due to massive soft tissue injury to the lower extremities (leg compartments only) or traumatic pelvic hemorrhage (all compartments).
    c. Tourniquet
        (1) Use as a last resort to control bleeding of an amputated extremity when all other methods of bleeding control have failed.
        (2) Application of a tourniquet can cause permanent damage to nerves, muscles and blood vessels resulting in the loss of an extremity.
        (3) Procedures for applying a tourniquet:
            (a) Use a bandage 4 inches wide and 6 to 8 layers deep.
            (b) Wrap it around the extremity twice at a point proximal to the bleeding but as distal on the extremity as possible.

(c) Tie one knot in the bandage and place a stick or rod on top of the knot and tie the ends of the bandage over the stick in a square knot.
(d) Twist the stick until the bleeding stops.
(e) Once the bleeding has stopped, secure the stick or rod in position.
(f) Notify other emergency personnel who may care for the patient that a tourniquet has been applied.
(g) Document the use of a tourniquet and the time applied in the prehospital patient report.

(4) A continuously inflated blood pressure cuff may be used as a tourniquet until bleeding stops.

(5) Precautions with the use of a tourniquet:
(a) Use a wide bandage and secure tightly.
(b) Never use wire, rope, a belt, or any other material that may cut into the skin and underlying tissue.
(c) Do not remove or loosen the tourniquet once it is applied unless directed to do so by medical direction.
(d) Leave the tourniquet in open view.
(e) Do not apply a tourniquet directly over any joint, but as close to the injury as possible.

E. Special areas (bleeding from the nose, ears or mouth)

1. Potential causes:
a. Injured skull
b. Facial trauma
c. Digital trauma (nose picking)
d. Sinusitis and other upper respiratory tract infections
e. Hypertension (high blood pressure)
f. Coagulation disorders

2. Bleeding from the ears or nose may occur because of a skull fracture. If the bleeding is the result of trauma, do not attempt to stop the blood flow. Collect the blood with a loose dressing, which may also limit exposure to sources of infection.

3. Emergency medical care for epistaxis (nosebleed):
a. Place the patient in a sitting position leaning forward.
b. Apply direct pressure by pinching the fleshy portion of the nostrils together.

        - c. Keep the patient calm and quiet.
- III. Internal Bleeding
  - A. Severity
    - 1. Internal bleeding can result in severe blood loss with resultant shock (hypoperfusion) and subsequent death.
    - 2. Injured or damaged internal organs commonly lead to extensive bleeding that is concealed.
    - 3. Painful, swollen, deformed extremities may also lead to serious internal blood loss.
    - 4. Suspicion and severity of internal bleeding should be based on the mechanism of injury and clinical signs and symptoms.
  - B. Relationship to mechanism of injury
    - 1. Blunt trauma
      - a. Falls
      - b. Motorcycle crashes
      - c. Pedestrian impacts
      - d. Automobile collisions
      - e. Blast injuries
      - f. Look for evidence of contusions, abrasions, deformity, impact marks, and swelling.
    - 2. Penetrating trauma
  - C. Signs and symptoms of internal bleeding
    - 1. Pain, tenderness, swelling or discoloration of suspected site of injury.
    - 2. Bleeding from the mouth, rectum, or vagina, or other orifice.
    - 3. Vomiting bright red blood or dark coffee ground colored blood.
    - 4. Dark, tarry stools or stools with bright red blood
    - 5. Tender, rigid, and/or distended abdomen
    - 6. Late signs and symptoms of hypovolemic shock (hypoperfusion)
      - a. Anxiety, restlessness, combativeness or altered mental status
      - b. Weakness, faintness or dizziness
      - c. Thirst
      - d. Shallow rapid breathing
      - e. Rapid weak pulse
      - f. Pale, cool, clammy skin
      - g. Capillary refill greater than 2 seconds - infant and child patients only
      - h. Dropping blood pressure (late sign)
      - i. Dilated pupils that are sluggish to respond
      - j. Nausea and vomiting

D. Emergency medical care
1. Body substance isolation
2. Maintain airway/artificial ventilation.
3. Administer oxygen if not already done during the initial assessment.
4. If bleeding is suspected in an extremity, control bleeding by direct pressure and application of a splint.
5. Immediate transport is critical for patient with signs and symptoms of shock (hypoperfusion).

IV. Shock (hypoperfusion syndrome)

A. Severity
1. Shock (hypoperfusion) results in inadequate perfusion of cells with oxygen and nutrients and inadequate removal of metabolic waste products.
2. Cell and organ malfunction and death can result from shock (hypoperfusion); therefore, prompt recognition and treatment is vital to patient survival.
3. Peripheral perfusion is drastically reduced due to the reduction in circulating blood volume.
4. Trauma patients develop shock (hypoperfusion) from the loss of blood from both internal and external sites. This type of shock (hypoperfusion) is referred to as hypovolemic or hemorrhagic shock.

B. Signs and symptoms of shock (hypoperfusion)
1. Mental states
   a. Restlessness
   b. Anxiety
   c. Altered mental status
2. Peripheral perfusion
   a. Delayed capillary refill greater than 2 seconds in normal ambient air temperature - infant and child patients only
   b. Weak, thready or absent peripheral pulses
   c. Pale, cool, clammy skin
3. Vital signs
   a. Decreased blood pressure (late sign)
   b. Increased pulse rate (early sign) - weak and thready
   c. Increased breathing rate
      (1) Shallow
      (2) Labored
      (3) Irregular

4. Other signs and symptoms
    a. Dilated pupils
    b. Marked thirst
    c. Nausea and vomiting
    d. Pallor with cyanosis to the lips
5. Infant and child patients can maintain their blood pressure until their blood volume is more than half gone, so by the time their blood pressure drops they are close to death. The infant or child in shock has less reserve.

C. Emergency medical care
1. Body substance isolation.
2. Maintain airway/artificial ventilation. Administer oxygen if indicated.
3. Control any external bleeding.
4. If signs of shock (hypoperfusion) are present and the lower abdomen is tender and pelvic injury is suspected, with no evidence of chest injury, apply and inflate the pneumatic antishock garment if approved by medical direction.
5. Elevate the lower extremities approximately 8 to 12 inches. If the patient has serious injuries to the pelvis, lower extremities, head, chest, abdomen, neck, or spine, keep the patient supine.
6. Splint any suspected bone or joint injuries.
7. Prevent loss of body heat by covering the patient with a blanket when appropriate.
8. Immediate transport.

## APPLICATION

Procedural (How)

1. Review the methods of controlling external bleeding with emphasis on body substance isolation.
2. Review the methods used to treat internal bleeding.
3. Review the methods used to treat the patient in shock (hypoperfusion).

617

### Contextual (When, Where, Why)

Bleeding and shock (hypoperfusion) are identified during the initial patient assessment after securing the scene and ensuring personal safety. Control of arterial or venous bleeding will be done upon immediate identification, after airway and breathing. Treatment of shock (hypoperfusion) and internal bleeding will be performed immediately following the initial assessment and prior to the transportation of the patient. Bleeding that is uncontrolled or excessive will lead to shock (hypoperfusion). Shock (hypoperfusion) will lead to inadequate tissue perfusion and eventual cell and organ death.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. The students should hear simulated situations to identify signs and symptoms of external bleeding, internal bleeding, and shock (hypoperfusion).
2. The students should hear normal systolic and diastolic sounds associated with taking a blood pressure.

### Visual (See)

1. The students should see audio-visual aids or materials of the various types of external bleeding and various signs of internal bleeding and shock (hypoperfusion).
2. The student should see audio-visual aids or materials of the proper methods to control bleeding, and treat for internal bleeding and shock (hypoperfusion).
3. The student should see a patient to identify major bleeding and signs of internal bleeding and shock (hypoperfusion).
4. The students should see, in simulated situations, the application of direct pressure, elevation, splints, counterpressure devices, cryotherapy, and tourniquets in the treatment of external bleeding.
5. The students should see, in simulated situations, the treatment of the internal bleeding and shock (hypoperfusion).
6. The students should see audio-visual aids or materials with known amounts of blood on gauze pads, vaginal pads, clothing, floors, and humans.

### Kinesthetic (Do)

1. The students should practice application of direct pressure, elevation, splints, and tourniquets.
2. The students should practice the treatment of internal bleeding and shock (hypoperfusion).
3. The students should practice completing a prehospital care report for patients with bleeding and/or shock (hypoperfusion).

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 5

## Trauma

## Lesson 5-3

## Musculoskeletal Care

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-3.1 Describe the function of the muscular system.(C-1)
5-3.2 Describe the function of the skeletal system.(C-1)
5-3.3 List the major bones or bone groupings of the spinal column; the thorax; the upper extremities; the lower extremities.(C-1)
5-3.4 Differentiate between an open and a closed painful, swollen, deformed extremity.(C-1)
5-3.5 State the reasons for splinting.(C-1)
5-3.6 List the general rules of splinting.(C-1)
5-3.7 List the complications of splinting.(C-1)
5-3.8 List the emergency medical care for a patient with a painful, swollen, deformed extremity. (C-1)

### AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-3.9 Explain the rationale for splinting at the scene versus load and go.(A-3)
5-3.10 Explain the rationale for immobilization of the painful, swollen, deformed extremity.(A-3)

### PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-3.11 Demonstrate the emergency medical care of a patient with a painful, swollen, deformed extremity.(P-1,2)
5-3.12 Demonstrate completing a prehospital care report for patients with musculoskeletal injuries.(P-2)

## PREPARATION

| | |
|---|---|
| Motivation: | Musculoskeletal injuries are one of the most common types of injuries encountered by the EMT-Basic. These injuries are largely non-life threatening in nature; however, some may be life threatening. Prompt identification and treatment of musculoskeletal injuries is crucial in reducing pain, preventing further injury and minimizing permanent damage. |
| Prerequisites: | BLS, Preparatory, Airway and Patient Assessment. |

## MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to musculoskeletal care. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure meeting the objectives of the curriculum. |
| EMS Equipment: | Splints: Padded arm and leg, air, traction, cardboard, ladder, blanket, pillow, pneumatic antishock garment, improvised splinting material, e.g., magazines, etc. |

## PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in musculoskeletal injuries and splinting techniques. |
| Assistant Instructor: | The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in musculoskeletal care and splinting techniques. |
| Recommended Minimum Time to Complete: | Four hours |

## PRESENTATION

### Declarative (What)

I. Musculoskeletal Review
    A. Anatomy review
    B. The skeletal system
II. Injuries to bones
    A. Mechanism of injury
        1. Direct force
        2. Indirect force
        3. Twisting force
    B. Bone or joint injuries
        1. Types
            a. Open - break in the continuity of the skin
            b. Closed - no break in the continuity of the skin
        2. Signs and symptoms
            a. Deformity or angulation
            b. Pain and tenderness
            c. Grating
            d. Swelling
            e. Bruising (discoloration)
            i. Exposed bone ends
            j. Joint locked into position
        3. Emergency medical care of bone or joint injuries
            a. Body substance isolation
            b. Administer oxygen if not already done and indicated.
            c. After life threats have been controlled, splint injuries in preparation for transport.
            d. Application of cold pack to area of painful, swollen, deformed extremity to reduce swelling.
            e. Elevate the extremity.
III. Splinting
    A. Reasons
        1. Prevent motion of bone fragments, bone ends or angulated joints.
        2. Minimize the following complications:
            a. Damage to muscles, nerves, or blood vessels caused by broken bones.

b. Conversion of a closed painful, swollen, deformed extremity to an open painful, swollen, deformed extremity.
c. Restriction of blood flow as a result of bone ends compressing blood vessels.
d. Excessive bleeding due to tissue damage caused by bone ends.
e. Increased pain associated with movement of bone ends.
f. Paralysis of extremities due to a damaged spine.

B. General rules of splinting
1. Assess pulse, motor, and sensation distal to the injury prior to and following splint application and record findings.
2. Immobilize the joint above and below the injury.
3. Remove or cut away clothing.
4. Cover open wounds with a sterile dressing.
5. If there is a severe deformity or the distal extremity is cyanotic or lacks pulses, align with gentle traction before splinting.
6. Do not intentionally replace the protruding bones.
7. Pad each splint to prevent pressure and discomfort to the patient.
8. Splint the patient before moving when feasible and no life threats.
9. When in doubt, splint the injury when feasible and no life threats.
10. If patient has signs of shock (hypoperfusion), align in normal anatomical position and transport (Total body immobilization. Example: Backboard takes care of all immobilization on emergency basis).

C. Equipment
1. Rigid splints
2. Traction splints
3. Pneumatic splints (air, vacuum)
4. Improvised splints, pillow
5. Pneumatic Anti Shock Garment (as a splint)

D. Hazards of improper splinting
1. Compression of nerves, tissues and blood vessels from the splint
2. Delay in transport of a patient with life threatening injury
3. Splint applied too tight on the extremity reducing distal circulation

4. Aggravation of the bone or joint injury
5. Cause or aggravate tissue, nerve, vessel or muscle damage from excessive bone or joint movement

E. Special considerations of splinting
  1. Long bone splinting procedure
    a. Body substance isolation
    b. Apply manual stabilization.
    c. Assess pulse, motor and sensory function.
    d. If there is a severe deformity or the distal extremity is cyanotic or lacks pulses, align with gentle traction before splinting.
    e. Measure splint.
    f. Apply splint immobilizing the bone and joint above and below the injury.
    g. Secure entire injured extremity.
    h. Immobilize hand/foot in position of function.
    i. Reassess pulse, motor, and sensation after application of splint and record.
  2. Splinting a joint injury
    a. Body substance isolation
    b. Apply manual stabilization.
    c. Assess pulse, motor and sensory function.
    d. Align with gentle traction if distal extremity is cyanotic or lacks pulses and no resistance is met.
    e. Immobilize the site of injury.
    f. Immobilize bone above and below the site of injury.
    g. Reassess pulse, motor and sensation after application of splint and record.
  3. Traction splinting
    a. Indications for use is a painful, swollen, deformed mid-thigh with no joint or lower leg injury.
    b. Contraindications of the use of a traction splint
      (1) Injury is close to the knee
      (2) Injury to the knee exists
      (3) Injury to the hip
      (4) Injured pelvis
      (5) Partial amputation or avulsion with bone separation, distal limb is connected only by marginal tissue. Traction would risk separation.
      (6) Lower leg or ankle injury.

c. Traction splinting procedure
   1. (1) Assess pulse, motor, and sensation distal to the injury and record.
   2. (2) Body substance isolation
   3. (3) Perform manual stabilization of the injured leg.
   4. (4) Apply manual traction - required when using a bi-polar traction splint.
   5. (5) Prepare/adjust splint to proper length.
   6. (6) Position splint under injured leg.
   7. (7) Apply proximal securing device (ischial strap).
   8. (8) Apply distal securing device (ankle hitch).
   9. (9) Apply mechanical traction.
   10. (10) Position/secure support straps.
   11. (11) Re-evaluate proximal/distal securing devices.
   12. (12) Reassess pulses, motor, sensation distal to the injury after application of the splint and record.
   13. (13) Secure torso to the longboard to immobilize hip.
   14. (14) Secure splint to the long board to prevent movement of splint.

## APPLICATION

### Procedural (How)

1. Show diagrams of the muscular system.
2. Show diagrams of the skeletal system.
3. Show audio-visual aids or materials of signs of open and closed type bone and joint injuries.
4. Demonstrate assessment of an injured extremity.
5. Demonstrate splinting procedures relevant to the general rules of splinting using: Rigid splints, traction splints, pneumatic splints, improvised splints, and pneumatic antishock garments.
6. Demonstrate procedure for splinting an injury with distal cyanosis or lacking a distal pulse.

626

### Contextual (When, Where, Why)

Injuries to bones and joints require splinting prior to the movement of the patient unless life-threatening injuries are present. If life-threatening injuries are present, splinting should be done en route to the receiving facility when possible.

Failure to splint or improperly splinting a bone or joint injury can result in damage to soft tissue, organs, nerves, muscles; increased bleeding associated with the injury; permanent damage or disability; conversion of a closed injury to an open injury; and an increase in pain.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. The student should hear simulations on various situations involving musculoskeletal injuries and the proper assessment and treatment.

### Visual (See)

1. The student should see diagrams of the muscular system.
2. The student should see diagrams of the skeletal system.
3. The student should see audio-visual aids or materials of signs of open and closed bone and joint injuries.
4. The student should see a demonstration of an assessment of an injured extremity.
5. The student should see a demonstration of splinting procedures relevant to the general rules of splinting using: Rigid splints, traction splints, pneumatic splints, improvised splints, and pneumatic antishock garments.
6. The student should see a demonstration of the procedure for splinting an injury with distal cyanosis or lacking a distal pulse.

### Kinesthetic (Do)

1. The student should practice assessment of an injured extremity.
2. The student should practice splinting procedures relevant to the general rules of splinting using: Rigid splints, traction splints, pneumatic splints, improvised splints, and pneumatic antishock garments.
3. The student should practice procedure for splinting an injury with distal cyanosis or lacking a distal pulse.
4. The student should practice completing a prehospital care report for patients with musculoskeletal injuries.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 5

## Trauma

## Lesson 5-4

## Injuries to the Head and Spine

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-4.1 State the components of the nervous system.(C-1)
5-4.2 List the functions of the central nervous system.(C-1)
5-4.3 Define the structure of the skeletal system as it relates to the nervous system.(C-1)
5-4.4 Relate mechanism of injury to potential injuries of the head and spine.(C-3)
5-4.5 Describe the implications of not properly caring for potential spine injuries.(C-1)
5-4.6 State the signs and symptoms of a potential spine injury.(C-1)
5-4.7 Describe the method of determining if a responsive patient may have a spine injury.(C-1)
5-4.8 Relate the airway emergency medical care techniques to the patient with a suspected spine injury.(C-3)
5-4.9 Describe how to stabilize the cervical spine.(C-1)
5-4.10 Discuss indications for sizing and using a cervical spine immobilization device.(C-1)
5-4.11 Establish the relationship between airway management and the patient with head and spine injuries.(C-1)
5-4.12 Describe a method for sizing a cervical spine immobilization device.(C-1)
5-4.13 Describe how to log roll a patient with a suspected spine injury.(C-1)
5-4.14 Describe how to secure a patient to a long spine board.(C-1)
5-4.15 List instances when a short spine board should be used.(C-1)
5-4.16 Describe how to immobilize a patient using a short spine board.(C-1)
5-4.17 Describe the indications for the use of rapid extrication.(C-1)

5-4.18 List steps in performing rapid extrication.(C-1)
5-4.19 State the circumstances when a helmet should be left on the patient.(C-1)
5-4.20 Discuss the circumstances when a helmet should be removed.(C-1)
5-4.21 Identify different types of helmets.(C-1)
5-4.22 Describe the unique characteristics of sports helmets.(C-1)
5-4.23 Explain the preferred methods to remove a helmet.(C-1)
5-4.24 Discuss alternative methods for removal of a helmet.(C-1)
5-4.25 Describe how the patient's head is stabilized to remove the helmet.(C-1)
5-4.26 Differentiate how the head is stabilized with a helmet compared to without a helmet.(C-3)

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:
5-4.27 Explain the rationale for immobilization of the entire spine when a cervical spine injury is suspected.(A-3)
5-4.28 Explain the rationale for utilizing immobilization methods apart from the straps on the cots.(A-3)
5-4.29 Explain the rationale for utilizing a short spine immobilization device when moving a patient from the sitting to the supine position.(A-3)
5-4.30 Explain the rationale for utilizing rapid extrication approaches only when they indeed will make the difference between life and death.(A-3)
5-4.31 Defend the reasons for leaving a helmet in place for transport of a patient.(A-3)
5-4.32 Defend the reasons for removal of a helmet prior to transport of a patient.(A-3)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:
5-4.33 Demonstrate opening the airway in a patient with suspected spinal cord injury.(P-1,2)
5-4.34 Demonstrate evaluating a responsive patient with a suspected spinal cord injury.(P-1,2)
5-4.35 Demonstrate stabilization of the cervical spine.(P-1,2)
5-4.36 Demonstrate the four person log roll for a patient with a suspected spinal cord injury.(P-1,2)
5-4.37 Demonstrate how to log roll a patient with a suspected spinal cord injury using two people.(P-1,2)
5-4.38 Demonstrate securing a patient to a long spine board.(P-1,2)

5-4.39 Demonstrate using the short board immobilization technique.(P-1,2)
5-4.40 Demonstrate procedure for rapid extrication.(P-1,2)
5-4.41 Demonstrate preferred methods for stabilization of a helmet. (P-1,2)
5-4.42 Demonstrate helmet removal techniques.(P-1,2)
5-4.43 Demonstrate alternative methods for stabilization of a helmet.(P-1,2)
5-4.44 Demonstrate completing a prehospital care report for patients with head and spinal injuries.(P-2)

## PREPARATION

| | |
|---|---|
| Motivation: | Injuries to the head and spine are extremely serious and may result in severe permanent disability or death if improperly treated or missed in the assessment. |
| Prerequisites: | BLS, Preparatory, Airway and Patient Assessment. |

### MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to injuries of the head and spine. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure meeting the objectives of the curriculum. |
| EMS Equipment: | Long spine board, short spine immobilization device, cervical immobilization devices, helmet, head immobilization device, blanket roll, two inch tape. |

### PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in head and spinal injuries. |
| Assistant Instructor: | The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in head and spinal emergencies and treatment. |
| Recommended Minimum Time to Complete: | Four hours |

## PRESENTATION

Declarative (What)

I. The Nervous System Review
    A. Components
    B. Actions
II. The Skeletal System
    A. Functions
    B. Components
        1. Skull
        2. Spinal column
            a. 33 bones
            b. Surrounds and protects the spinal cord.
III. Injuries to the Spine
    A. Mechanism of injury
        1. Compression
            a. Falls
            b. Diving accidents
            c. Motor vehicle accidents
        2. Excessive flexion, extension, rotation
        3. Lateral bending
        4. Distraction
            a. Pulling apart of the spine
            b. Hangings
        5. Maintain a high index of suspicion
            a. Motor vehicle crashes
            b. Pedestrian - vehicle collisions
            c. Falls
            d. Blunt trauma
            e. Penetrating trauma to head, neck, or torso
            f. Motorcycle crashes
            g. Hangings
            h. Diving accidents
            i. Unconscious trauma victims
    B. Signs and symptoms
        1. Ability to walk, move extremities or feel sensation; or lack of pain to spinal column does not rule out the possibility of spinal column or cord damage.
        2. Tenderness in the area of injury

3. Pain associated with moving
   a. Do not ask the patient to move to try to elicit a pain response.
   b. Do not move the patient to test for a pain response.
4. Tell the patient not to move while asking questions.
5. Pain independent of movement or palpation
   a. Along spinal column
   b. Lower legs
   c. May be intermittent
6. Obvious deformity of the spine upon palpation
7. Soft tissue injuries associated with trauma
   a. Head and neck to cervical spine
   b. Shoulders, back or abdomen - thoracic, lumbar
   c. Lower extremities - lumbar, sacral
8. Numbness, weakness or tingling in the extremities
9. Loss of sensation or paralysis below the suspected level of injury
10. Loss of sensation or paralysis in the upper or lower extremities
11. Incontinence

C. Assessing the potential spine injured patient
1. Responsive patient
   a. Mechanism of injury
   b. Questions to ask
      (1) Does your neck or back hurt?
      (2) What happened?
      (3) Where does it hurt?
      (4) Can you move your hands and feet?
      (5) Can you feel me touching your fingers?
      (6) Can you feel me touching your toes?
   c. Inspect for contusions, deformities, lacerations, punctures, penetrations, swelling.
   d. Palpate for areas of tenderness or deformity.
   e. Assess equality of strength of extremities
      (1) Hand grip
      (2) Gently push feet against hands
2. Unresponsive patient
   a. Mechanism of injury
   b. Initial assessment
   c. Inspect for:
      (1) Contusions
      (2) Deformities

      - (3) Lacerations
      - (4) Punctures/penetrations
      - (5) Swelling
    - d. Palpate for areas of tenderness or deformity.
    - e. Obtain information from others at the scene to determine information relevant to mechanism of injury or patient mental status prior to the EMT-Basic's arrival.
- D. Complications
  - 1. Inadequate breathing effort
  - 2. Paralysis
- E. Emergency medical care
  - 1. Body substance isolation
  - 2. Establish and maintain in-line immobilization.
    - a. Place the head in a neutral in-line position unless the patient complains of pain or the head is not easily moved into position.
    - b. Place head in alignment with spine.
    - c. Maintain constant manual in-line immobilization until the patient is properly secured to a backboard with the head immobilized.
  - 3. Perform initial assessment.
    - a. Whenever possible, airway control must be done with in-line immobilization.
    - b. Whenever possible, artificial ventilation must be done with in-line immobilization.
  - 4. Assess pulse, motor and sensation in all extremities.
  - 5. Assess the cervical region and neck.
  - 6. Apply a rigid, cervical immobilization device.
    - a. Properly size the cervical immobilization device. If it doesn't fit use a rolled towel and tape to the board and have rescuer hold the head manually.
    - b. An improperly fit immobilization device will do more harm than good.
  - 7. If found in a lying position, immobilize the patient to a long spine board.
    - a. Position the device.
    - b. Move the patient onto the device by log rolling.
      - (1) One EMT-Basic must maintain in-line immobilization of the head and spine.
      - (2) EMT-Basic at the head directs the movement of the patient.

(3) One to three other EMT-Basics control the movement of the rest of the body.
(4) Quickly assess posterior body if not already done in focused history and physical exam.
(5) Position the long spine board under the patient.
(6) Place patient onto the board at the command of the EMT-Basic holding in-line immobilization using a slide, proper lift, log roll or scoop stretcher so as to limit movement to the minimum amount possible. Which method to use must be decided based upon the situation, scene and available resources.
(7) Pad voids between the patient and the board.
(a) Adult
i) Under the head
ii) Voids under torso. Be careful of extra movement.
(b) Infant and child - pad under the shoulders to the toes to establish a neutral position.
(8) Immobilize torso to the board.
(9) Immobilize the patient's head to the board.
(10) Secure the legs to the board.
(11) Reassess pulses, motor and sensation and record.

8. If the patient is found in a sitting position in a chair, immobilize with a short spine immobilization device. Exception: If the patient must be removed urgently because of his injuries, the need to gain access to others, or dangers at the scene, he must then be lowered directly onto a longboard and removed with manual immobilization provided.

a. Position device behind the patient.
b. Secure the device to the patient's torso.
c. Evaluate torso fixation and adjust as necessary without excessive movement of the patient.
d. Evaluate and pad behind the patient's head as necessary to maintain neutral in-line immobilization.
e. Secure the patient's head to the device.
f. Insert a longboard under the patient's buttocks and rotate and lower him to it. If not possible, lower him to the long spine board.
g. Reassess pulses, motor and sensory in all extremities and record.

        9. If the patient is found in a standing position, immobilize the patient to a long spine board.
            a. Position the device behind patient.
            b. Move the patient onto the device by:
                (1) One rescuer on each side of the patient, one additional rescuer at the foot facing the patient.
                (2) The rescuers on both sides of the patient reach with the hand closest to the patient under the arm to grasp the board, and use the hand farthest from the patient to secure the head.
                (3) Once the position is assured, they place the leg closest to the board behind the board and begin to tip the top backward. The rescuer at the foot of the board secures the board and the patient to prevent them from sliding, and the board is brought into a level horizontal position.
        10. If the patient is critically injured, perform a rapid extrication.
        11. Transport the patient immediately.
            a. Bring body into alignment.
            b. Transfer to long board without short spine board.

IV. Injuries to the Brain and Skull
    A. Head injuries
        1. Injuries to the scalp
            a. Very vascular, may bleed more than expected.
            b. Control bleeding with direct pressure.
        2. Injury to the brain - injury of brain tissue or bleeding into the skull will cause an increase of pressure in the skull.
    B. Related non-traumatic conditions
        1. Non-traumatic injuries to the brain may occur due to clots or hemorrhaging.
        2. Non-traumatic brain injuries can be a cause of altered mental status.
        3. Signs and symptoms parallel that of traumatic injuries with the exception of evidence of trauma and a lack of mechanism of injury.
    C. Skull injury - signs and symptoms
        1. Mechanism of trauma
        2. Contusions, lacerations, hematomas to the scalp
        3. Deformity to the skull
        4. Blood or fluid (cerebrospinal fluid) leakage from the ears or nose
        5. Bruising (discoloration) around the eyes

6. Bruising (discoloration) behind the ears (mastoid process)

D. Head injury
  1. Traumatic
  2. Signs and symptoms
    a. Altered or decreasing mental status is the best indicator of a brain injury.
      (1) Confusion, disorientation, or repetitive questioning
      (2) Conscious - deteriorating mental status
      (3) Unresponsive
    b. Irregular breathing pattern
    c. Consideration of mechanism of injury
      (1) Deformity of windowshield
      (2) Deformity of helmet
    d. Contusions, lacerations, hematomas to the scalp
    e. Deformity to the skull
    f. Blood or fluid (cerebrospinal fluid) leakage from the ears and nose
    g. Bruising (discoloration) around the eyes
    h. Bruising (discoloration) behind the ears (mastoid process)
    i. Neurologic disability
    j. Nausea and/or vomiting
    k. Unequal pupil size with altered mental status
    l. Seizure activity may be seen.

E. Open head injury
  1. Signs and symptoms
    a. Consideration of mechanism of injury
      (1) Deformity of windowshield
      (2) Deformity of helmet
    b. Contusions, lacerations, hematomas to the scalp
    c. Deformity to the skull
    d. Penetrating injury - do not remove impaled objects in the skull
    e. Soft area or depression upon palpation
    f. Exposed brain tissue if open
    g. Bleeding from the open bone injury
    h. Blood or fluid (cerebrospinal fluid) leakage from the ears and nose
    i. Bruising (discoloration) around the eyes
    j. Bruising (discoloration) behind the ears (mastoid process)
    k. Nausea and/or vomiting

633

        I. Possible signs and symptoms of a closed head injury may exist if brain injury has occurred.

  F. Emergency medical care
    1. Body substance isolation
    2. Maintain airway/artificial ventilation/oxygenation.
    3. Initial assessment with spinal immobilization should be done on scene with a complete detailed physical exam en route.
    4. With any head injury, the EMT-Basic must suspect spinal injury. Immobilize the spine.
    5. Closely monitor the airway, breathing, pulse, and mental status for deterioration.
    6. Control bleeding.
      a. Do not apply pressure to an open or depressed skull injury.
      b. Dress and bandage open wound as indicated in the treatment of soft tissue injuries.
    7. If a medical injury or non-traumatic injury exist, place patient on the left side.
    8. Be prepared for changes in patient condition.
    9. Immediately transport the patient.

V. Immobilization
  A. Cervical spine immobilization devices
    1. Indications
      a. Any suspected injury to the spine based on mechanism of injury, history or signs and symptoms.
      b. Use in conjunction with short and long backboards.
    2. Sizing
      a. Various types of rigid cervical immobilization devices exist, therefore, sizing is based on the specific design of the device.
      b. An improperly sized immobilization device has a potential for further injury.
      c. Do not obstruct the airway with the placement of a cervical immobilization device.
      d. If it doesn't fit use a rolled towel and tape to the board and manually support the head. An improperly fit device will do more harm than good.
    3. Precautions
      a. Cervical immobilization devices alone do not provide adequate in-line immobilization.

        b. Manual immobilization must always be used with a cervical immobilization device until the head is secured to a board.

B. Short backboards
    1. Several different types of short board immobilization devices exist.
        a. Vest type devices
        b. Rigid short board
    2. Provides stabilization and immobilization to the head, neck and torso.
    3. Used to immobilize non-critical sitting patients with suspected spinal injuries.
    4. General application
        a. Start manual in-line immobilization.
        b. Assess pulses, motor and sensory function in all extremities.
        c. Assess the cervical area.
        d. Apply a cervical immobilization device.
        e. Position short board immobilization device behind the patient.
        f. Secure the device to the patient's torso.
        g. Evaluate torso and groin fixation and adjust as necessary without excessive movement of the patient.
        h. Evaluate and pad behind the patient's head as necessary to maintain neutral in-line immobilization.
        i. Secure the patient's head to the device.
        j. Release manual immobilization of head.
        k. Rotate or lift the patient to the long spine board.
        l. Immobilize patient to long spine board.
        m. Reassess pulses, motor and sensory function in all extremities.

C. Long backboards (Full body spinal immobilization devices)
    1. Several different types of long board immobilization devices exist.
    2. Provide stabilization and immobilization to the head, neck and torso, pelvis and extremities.
    3. Used to immobilize patients found in a lying, standing, or sitting position.
    4. Sometimes used in conjunction with short backboards.
    5. General application
        a. Start manual in-line immobilization.

b. Assess pulses, motor and sensory function in all extremities.
c. Assess the cervical area.
d. Apply a cervical immobilization device.
e. Position the device.
f. Move the patient onto the device by log roll, suitable lift or slide, or scoop stretcher. A log roll is:
  (1) One EMT-Basic must maintain in-line immobilization.
  (2) EMT-Basic at the head directs the movement of the patient.
  (3) One to three other EMT-Basics control the movement of the rest of the body.
  (4) Quickly assess posterior body if not already done in initial assessment.
  (5) Position the long spine board under the patient.
  (6) Roll patient onto the board at the command of the EMT-Basic holding in-line immobilization.
g. Pad voids between the patient and the board.
  (1) Adult
    (a) Under the head as needed
    (b) Under the torso as needed
  (2) Infant and child - pad under the shoulders to the toes to establish a neutral position.
h. Immobilize torso to the board by applying straps across the chest and pelvis and adjust as needed.
i. Immobilize the patient's head to the board.
j. Fasten legs, proximal to and distal to the knees.
k. Reassess pulses, motor and sensation and record.

VI. Special Considerations
A. Rapid extrication
1. Indications
a. Unsafe scene
b. Unstable patient condition warrants immediate movement and transport.
c. Patient blocks the EMT-Basic's access to another, more seriously injured, patient.
d. Rapid extrication is based on time and the patient, and not the EMT-Basic's preference.
2. Procedure - refer to section on Lifting and Moving the Patient.

B. Helmet removal
  1. Special assessment needs for patients wearing helmets.
    a. Airway and breathing.
    b. Fit of the helmet and patient's movement within the helmet.
    c. Ability to gain access to airway and breathing.
  2. Indications for leaving the helmet in place
    a. Good fit with little or no movement of the patient's head within the helmet.
    b. No impending airway or breathing problems.
    c. Removal would cause further injury to the patient.
    d. Proper spinal immobilization could be performed with helmet in place.
    e. No interference with the EMT-Basic's ability to assess and reassess airway and breathing.
  3. Indications for removing the helmet
    a. Inability to assess and/or reassess airway and breathing.
    b. Restriction of adequate management of the airway or breathing.
    c. Improperly fitted helmet allowing for excessive patient head movement within the helmet.
    d. Proper spinal immobilization cannot be performed due to helmet.
    e. Cardiac arrest.
  4. Types of helmets:
    a. Sports
      (1) Typically open anteriorly
      (2) Easier access to airway
    b. Motorcycle
      (1) Full face
      (2) Shield
    c. Other
  5. General rules for removal of a helmet.
    a. The technique for removal of a helmet depends on the actual type of helmet worn by the patient.
    b. Take eyeglasses off before removal of the helmet.
    c. One EMT-Basic stabilizes the helmet by placing his hands on each side of the helmet with the fingers on the mandible to prevent movement.
    d. Second EMT-Basic loosens the strap.

- e. The second EMT-Basic places one hand on the mandible at the angle of the jaw and the other hand posteriorly at the occipital region.
- f. The EMT-Basic holding the helmet pulls the sides of the helmet apart and gently slips the helmet halfway off the patient's head then stops.
- g. The EMT-Basic maintaining stabilization of the neck repositions, slides the posterior hand superiorly to secure the head from falling back after complete helmet removal.
- h. The helmet is removed completely.
- i. The EMT-Basic then can proceed with spinal immobilization as indicated in the spinal immobilization section.

C. Infants and children - immobilize the infant or child on a rigid board appropriate for size (short, long or padded splint), according to the procedure outline in the spinal immobilization section. Special considerations:

1. Pad from the shoulders to the heels of the infant or child, if necessary to maintain neutral immobilization.
2. Properly size the cervical immobilization device. If it doesn't fit, use a rolled towel and tape to the board and manually support head. An improperly fit immobilization device will do more harm than good.

## APPLICATION

### Procedural (How)

1. Show diagrams or illustrations of the nervous system anatomy.
2. Show diagrams or illustrations of the structure of the skeletal system as it relates to the nervous system.
3. Show audio-visual aids or materials of related mechanism of injury to potential injuries of the head and spine.
4. Show audio-visual aids or materials of potential signs and symptoms of a potential spine injury.
5. Demonstrate the method of determining if a responsive patient may have a spine injury.

643

6. Demonstrate the airway emergency medical care techniques for the patient with a suspected spinal cord injury.
7. Demonstrate methods for sizing various cervical spine immobilization devices.
8. Demonstrate rapid extrication techniques.
9. Demonstrate how to stabilize the cervical spine.
10. Demonstrate how to immobilize a patient using a short spine board.
11. Demonstrate how to log roll a patient with a suspected spine injury.
12. Demonstrate how to secure a patient to a long spine board.
13. Demonstrate the preferred methods to remove sports, motorcycle and various other helmets.
14. Demonstrate alternative methods for removal of a helmet.
15. Demonstrate how the head is stabilized with a helmet compared to without a helmet.
16. Demonstrate how the patient's head is stabilized in order to remove a helmet.
17. Demonstrate sudden airway emergency medical care with helmet on.

### Contextual (When, Where, Why)

For every patient who is involved in any type of traumatic incident in which the mechanism of injury and/or signs and symptoms indicate a possible spinal injury, complete spinal immobilization must be conducted. Critically injured or ill patients may be rapidly moved only with spinal immobilization techniques utilized. A short backboard or spinal immobilization device will be used on non-critically injured patients at the scene prior to movement of the patient. However, when patients present with life threats, or the scene is unsafe for the EMT-Basic, the patient is moved by a rapid extrication technique. Failure to immobilize the spine or treat the head injured patient will lead to increased patient morbidity and mortality.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Simulations in which immobilization techniques are needed and performed.
2. Simulations in which patients present with head injuries.

### Visual (See)

1. The student should see audio-visual aids or materials of the nervous system anatomy.
2. The student should see audio-visual aids or materials of the structure of the skeletal system as it relates to the nervous system.
3. The student should see audio-visual aids or materials of mechanism of injury related to potential injuries of the head and spine.

4. The student should see audio-visual aids or materials of signs and symptoms of a potential spine injury.
5. The student should see a demonstration of the method of determining if a responsive patient may have a spine injury.
6. The student should see a demonstration of the airway emergency medical care techniques for the patient with a suspected spine injury.
7. The student should see a demonstration of the methods for sizing various cervical spine immobilization devices.
8. The student should see a demonstration of rapid extrication techniques.
9. The student should see a demonstration of how to stabilize the cervical spine.
10. The student should see a demonstration of how to immobilize a patient using a short spine board.
11. The student should see a demonstration of how to log roll a patient with a suspected spinal injury.
12. The student should see a demonstration of how to secure a patient to a long spine board.
13. The student should see a demonstration of the preferred methods to remove sports, motorcycle and various other helmets.
14. The student should see a demonstration of alternative methods for removal of a helmet.
15. The student should see a demonstration of how the head is stabilized with a helmet compared to without a helmet.
16. The student should see a demonstration of how the patient's head is stabilized in order to remove a helmet.
17. The student should see various types of long backboards.
18. The student should see various types of vest type immobilization devices.
19. The student should see various types of short backboards.
20. The student should see various types of helmets.
21. The student should see a demonstration of immobilization of an infant or child patient on a long backboard.

### Kinesthetic (Do)

1. The student should practice opening the airway in a patient with suspected spinal cord injury.
2. The student should practice evaluating a responsive patient with a suspected spinal cord injury.
3. The student should practice stabilization of the cervical spine.
4. The student should practice using the short board immobilization technique.
5. The student should practice the four person log roll for a patient with a suspected spinal cord injury.

6. The student should practice how to log roll a patient with a suspected spinal cord injury using two people.
7. The student should practice securing a patient to a long spine board.
8. The student should practice helmet removal techniques.
9. The student should practice the procedure for rapid extrication.
10. The student should practice the preferred methods for stabilization of the helmet.
11. The student should practice alternative methods for stabilization of the helmet.
12. The student should practice preferred methods for stabilization of the head.
13. The student should practice alternative methods for stabilization of the head.
14. The student should practice completing a prehospital care report for patients with head and spinal injuries.
15. The student should practice the use of cervical immobilization devices, rolls and short boards for immobilizing the infant or child patient.

### INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

047

## ACTIVITY MATERIALS

### LESSON 1

1.1 Icebreaker (no materials)

### LESSON 2

2.1 Instructor Roleplay scenarios (instructor only)

### LESSON 3

3.1 Negligence scenarios

### LESSON 4

4.1 The Apple Exercise (instructions, instructor only)

### LESSON 5

5.1 Room Setup scenarios

### LESSON 6

6.1 Use Your Objectives (no materials)

6.2 Teach a Simple Skill (no materials)

6.3 Affective Skills scenarios

### LESSON 7

7.1 Evaluation Instruments (no materials)

### LESSON 8

8.1 Decide on Your Methods (no materials)

8.2 Instructor Roleplay scenarios

8.3 Mini-Presentation activity description

### LESSON 9

9.1 Design Your Own Media (no materials)

### LESSON 10

10.1 Develop Your Lesson Plan (no materials)

### FINAL PRESENTATIONS

Refer to the Final Presentation section of your notebook.

## Activity 2.1—Instructor Roleplay

**Objective:**

Given a scenario, students will participate in a roleplay activity. The students will enact the roles and responsibilities discussed in this lesson.

**Suggested Time:** 30 minutes

**Organization:** Pairs, then Entire Class

**Materials:** Scenario Cards

Please note that the activity materials include two types of scenario cards:

- Paired roleplay (a set of two cards, one for the "instructor" and one for the student)
- Blank cards for you to fill in with additional scenarios

**Instructions:**

1. Break the class into pairs. Hand out copies of the roleplay cards and have participants look at the scenario described.
2. Give participants 3 minutes to roleplay their scenario.
3. Have everybody switch roles and pass out another scenario to each pair.
4. Have participants roleplay the second scenario in front of the class.
5. Debrief the activity by reviewing the applicable instructor roles and attributes. Reinforce the use of positive, constructive, and corrective feedback whenever possible.

## ACTIVITY 2.1—INSTRUCTOR ROLEPLAY

Your role is to play an irresponsible student. Your opening line is: "I just can't make it to the exam next Thursday night ... "

You are the instructor. This student just approached you in the hallway during break.

## ACTIVITY 2.1—INSTRUCTOR ROLEPLAY

Your role is to play a student who has had a death in the family and has fallen behind. Your opening line is: "I just don't know if I'll be able to make it through this course."

You are the instructor. The student has just come to you to discuss something "personal."

## ACTIVITY 2.1—INSTRUCTOR ROLEPLAY

Your role is to play a hostile student. Your opening line is: "The reason I didn't do well on that Practical Exam is that you didn't give us enough chance to practice..."

You are the instructor. You know that this student may fail the course.

## ACTIVITY 2.1—INSTRUCTOR ROLEPLAY

Your role is to play a student who has come to class smelling of alchohol for three weeks running. Your opening line is: "Look, I really don't think this has anything to do with my EMS work..."

You are confronting a student who has come to class smelling of alchohol for three weeks running.

## ACTIVITY 2.1—INSTRUCTOR ROLEPLAY

Your role is to play a very competent student that always comes in late. Your opening line is: "Well, yes, I know I'm late sometimes, but I always get the job done..."

You are the instructor. You are confronting the best student in class—who is always late.

## ACTIVITY 2.1—INSTRUCTOR ROLEPLAY

## ACTIVITY 3.1—NEGLIGENCE SCENARIOS

**Scenario #1**

A student in your class contracts Hepatitis B. The student sues you, the instructor, for negligence based on the fact that another student in the class also had Hepatitis B and that their only form of contact was through using the same mannequin in your class. You always use disposable covers for the mannequin's mouth and always clean the mannequin before class. Your log book was not completed for that class.

Could you be considered negligent? If so, describe how each of the four elements of negligence is met. If not, describe how at least one has not been met.

**Scenario #2**

An EMT witnesses a woman having a heart attack at a local coffee shop, but does not offer to help. Later the woman learns that an EMT was present and decides to sue both the EMT and her instructor. Your notes for the lesson clearly state that an EMT who is not on duty is never required to give assistance.

Could you be considered negligent? If so, describe how each of the four elements of negligence is met. If not, describe how at least one has not been met.

## ACTIVITY 3.1—NEGLIGENCE SCENARIOS

**Scenario #3**

An EMT, who was a former student of yours, fails to adequately isolate a patient with a new strain of virus, now airborne. The EMT and a bystander both contract the virus. The airborne nature of this new strain was just beginning to be described in medical journals when you delivered training to this EMT's class, but no changes had been made to the standard curriculum.

Could you be considered negligent? If so, describe how each of the four elements of negligence is met. If not, describe how at least one has not been met.

**Scenario #4**

During a class you direct pairs of students to practice performing IVs. Your beeper goes off and you go to the pay phone to respond to an urgent message, leaving the students without direct supervision. During that time, an IV breaks off, causing a plastic embolus and resulting in a student's hospitalization.

Could you be considered negligent? If so, describe how each of the four elements of negligence is met. If not, describe how at least one has not been met.

## Activity 4.1—The Apple Exercise

**Objectives:** Demonstrate how learning and the application of learning is impacted when you move from "real" examples to relatively "unreal/symbolic" representations of a concept.

Use this activity to demonstrate that there are kinesthetic, auditory, and visual aspects of learning. These learning styles are covered in depth later in this lesson.

**Suggested Time:** 30 minutes

**Organization:** Small groups and entire class

**Materials:** One per group of each of the following:

1. Apple (and a knife)
2. Fake apple (realistic, craft-type)
3. Line drawing of an apple on an index card
4. The word "apple" written on an index card

**Instructions:**

- Have each group select a reporter and a facilitator.
- You, the instructor, should function as the timekeeper.

1. First hand out an apple to each group. Have them "experience" the apple and list as many words as possible to describe the item within 3 minutes.

2. Then, ask the facilitator for each group to give you three words from their list. Record on a flipchart.

3. Finally, ask each group to tally the number of words generated and record it on their list.

Continue the process for each item on the list.

Debrief through guided discussion as an entire class. Discuss the differences between the lists generated, but not only in terms of the number of words. Ask students if a person reading each list would be able to identify what was being described.

**Suggested Enhancement:**

If desired, demonstrate the use of rewards in an adult learning environment as follows:

1. Tell the groups when you start the exercise that the "winner" will get a prize.
2. Add up the number of words that each group generated.
3. Reward the group with the "highest score" by giving them a prize, e.g., some candy.
4. Debrief.
5. Then, give out the "prize" to the whole class.

## DEBRIEF

Ask how the groups feel about the reward system. Possible responses may include:

- Not fair, their list was not as creative
- Some of their words shouldn't be accepted
- What about us? We did well, too

Compare and contrast the use of rewards in a adult setting versus with children. Ask the groups how being told they would get a "prize" affected task performance. Ask the group for ideas about how to effectively motivate and reward adults.

## ACTIVITY 5.1—ROOM SETUP DESCRIPTION CARDS

1. A graduate seminar with 12 students: The Philosphophic Underpinnings of the New Russian Republic

2. Certification for Electrician's Apprentice with a class size of 10

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1. Business School class with 35 students: Microcomputer Use for the Administrative Assistant

2. A half-day session sponsored by the International Society of Arboriculture with 6 students enrolled: Safe Procedures in Electrical Accidents.

## ACTIVITY 5.1—ROOM SETUP DESCRIPTION CARDS

1. Undergraduate course with 60 students: Introduction to Mass Communication

2. Class of 18: Pig heart dissection

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1. EMT-Paramedic Refresher Course with 8 students: Pre-Hospital Trauma Life Support (PHTLS)

2. Tutoring session for homebound student in Biology

## ACTIVITY 5.1—ROOM SETUP DESCRIPTION CARDS

1. A graduate course in Environmental Sciences with 20 students: Biohazards of the Chesapeake Bay

2. Technical School for Network Techicians. Class Size: 40 students

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1. English as a Second Language class for eight volunteers

2. Medical School class with 26 students: Pharmacology

## ACTIVITY 6.3—SITUATIONS REQUIRING AFFECTIVE SKILLS

Parents have just been informed that their six-year-old son has died of poisoning. The father becomes belligerent and accuses you of failing to treat his son in time.

You've arrived on a call and all indications are that the patient is dying. Family members are present and one is hysterical.

You've answered a call from a woman who has been beaten and should be checked for internal injuries. No none else is present.

You're riding with the ambulance crew and the vehicle is involved in an accident. The driver of the other car begins screaming at you.

You are part of a volunteer rescue squad. During a weekly social get together the group has just been told that the money that you were all expecting for new equipment has been allocated to something else. One team member has threatened to quit.

A student has come to you to report the death of their mother.

## ACTIVITY 6.3—SITUATIONS REQUIRING AFFECTIVE SKILLS

You need to explain to an elderly patient that you have to take them to the hospital.

You've arrived at an accident and many bystanders have gathered around. Their presence is making the victim uncomfortable.

You are dealing with a child who has been cut badly and is scared. The mother is crying.

## Activity 8.2—Instructor Roleplay

**Objective:**

Given a scenario, students will participate in a roleplay activity. Students will simulate appropriate instructor responses, display proficiency in the use of feedback, and demonstrate the communication skills discussed in this lesson.

| | |
|---|---|
| **Suggested Time:** | 30 minutes |
| **Organization:** | Paired roleplays conducted in front of the class |
| **Materials:** | Scenario Cards |

Please note that the activity materials include three types of scenario cards:

- Roleplay Scenario Cards (6)—these cards are given to the participant playing the student. The instructor responds appropriately, according to the objectives listed above.
- An additional card has been provided with four scenarios that require a classroom situation to roleplay. To enact a group roleplay, see the instructions below.
- A blank card for you to reproduce and fill in with additional scenarios

**Instructions:**

PAIRED ROLEPLAYS

1. Break into pairs. Hand out copies of the roleplay cards and have participants look at the scenario described.
2. Give participants 3 minutes to roleplay their scenario.
3. Debrief the activity by reviewing instructor roles and the use of feedback. Reinforce the principles of active listening and review confirming as opposed to disconfirming responses, using examples from the roleplay to illustrate.

## Activity 8.2—Active Listening Roleplay (cont'd)

### GROUP ROLEPLAY

If desired, set up and enact a group roleplay for additional practice in a classroom rather than a one-on-one, or counseling, situation.

1. Break the class into two groups
2. Have each group select an "instructor"
3. Assign a couple of specific roles, and ask the others to roleplay one of the "challenging" students discussed in Lesson 2, e.g., the Clown, the "Voice of Experience," etc.
4. Have each group roleplay a classroom interaction
5. Debrief, pointing out the differences between group and one-on-one encounters with students.

# ACTIVITY 8.2—INSTRUCTOR SKILLS ROLEPLAY

You are upset because another student has been harassing you and have asked for a meeting to discuss it.

A new EMT has volunteered in your unit, and you just don't like him. Things got nasty during your last shift and you're thinking of quitting. You've decided to talk it over with your instructor.

## ACTIVITY 8.2—INSTRUCTOR SKILLS ROLEPLAY

You've come to ask for an extension for completing your clinicals.

The school has lost your records and you want to enroll in a class.

## ACTIVITY 8.2—INSTRUCTOR SKILLS ROLEPLAY

Your car broke down on the way to class the day you were to do your Final Presentation.

Last night when you were on call, your team responded to a call in which the father of three children was killed in a head-on collision. You are upset and just want to talk about it.

## ACTIVITY 8.2—INSTRUCTOR SKILLS ROLEPLAY

During a class session, you express confusion about the procedure the instructor is explaining.

You're in a class on Patient Assessment and you're reluctant to do the secondary assessment.

You are an elderly person who has held advanced first aid cards for 30 years. You feel this is all you need to provide good patient care on the ambulance.

You are a paid provider and are being forced to attend this class with no salary incentive. You feel you already know the material or that it is not relevant in your position.

## ACTIVITY 8.3—MINI-PRESENTATION

In this exercise you will make a three-four minute presentation to practice the skills we have just discussed. You will tell about a personal experience, the best thing that ever happened to you, your biggest surprise, your most intense scare, your most embarrassing moment—anything that you feel strongly about. You can choose a work-related story, but it is not necessary.

Focus on using the communication skills we have discussed.

- Engaging opening
- Eye contact
- Open posture
- Appropriate gestures and movement
- Understandable and clear speaking voice
- Logically ordered presentation
- Stress key points
- Effective closing

You will have ten minutes to prepare your presentation. Use this basic structure.

### Introduction

Introduce the topic. Draw in the audience's interest. Ask a question, show a prop, throw out a teaser (something trainees will be waiting to hear the outcome of at the end of the story).

### Body

Tell your story.

### Conclusion

Close your presentation with a "punchline." The effect the event had, what you learned, or advice for your audience if they find themselves in a similar situation.

Give the presentation without note cards and do not stand behind the lectern or table. Becoming comfortable and working without these props will help you to develop an open, natural style.

## REFERENCES

### LESSON 1

None

### LESSON 2

2-1 Pre-Course Checklist

### LESSON 3

3-1 National Registry
  Purpose of Establishment
  EMT-Paramedics Job Analysis
  Examination Accommodations—Disability Policy

### LESSON 4

4-1 EMT-Basic, Student Activities section

4-2 Laws of Learning

### LESSON 5

5-1 Pre-Registration Form, Student Information Survey

### LESSON 6

6-1 Giving Instructions

6-2 Demonstration Checklist

6-3 Behavioral Terms for Writing Objectives

6-4 ABCDs... Questions to Ask About Your Objectives

### LESSON 7

7-1 Survey Instrument (Course Evaluation)

7-2 Epinephrine Auto-Injector Skill Sheet

## APPENDIX B

### LESSON 8

8-1 Instructional Methods

8-2 Sample Action Plan

8-3 Preparing to Teach

8-4 Mini-Presentation Checklist

### LESSON 9

9-1 Training Media Reference

9-2 How to Design Transparencies

9-3 Tips for Overhead Projection

9-4 How to Operate an LCD Panel

9-5 Successful Slide Presentations

9-6 Tips for Video and Film Presentations

9-7 Troubleshooting Guide

### LESSON 10

10-1 Sample Lesson from EVOC and EMT-Basic

10-2 Sample Remediation sheet from EMT-B, Appendix G

10-3 Sample Enrichment sheet from EMT-B, Appendix F

### FINAL PRESENTATION

Student Presentation Evaluation Form

End-of-Lesson Evaluation Form

End-of-Course Evaluation Form

071

## PRE-COURSE CHECKLIST

- Physical surroundings; are they comfortable?
- Is the evacuation plan posted?
- Is the seating arrangement conducive to the type of interaction proposed in the lesson plan?
- Is the lesson plan current?
- Are the necessary supplies available?
- Are the training aids organized?
- Is the AV equipment operational?
- Is the instructor/classroom appearance appropriate?
- Are there enough handouts for scheduled activities?

ATTACHMENT 3

## National Registry of Emergency Medical Technicians

6610 Busch Blvd.
P.O. Box 29233
Columbus, OH 43229

## PURPOSE OF ESTABLISHMENT

This establishment is nationally recognized for certifying emergency medical technicians (EMTs). EMT candidates undergoing examination for certification will have completed a training program which included didactic instruction, clinical instruction, and supervised field internship.

Overall goals of this establishment are to promote and improve delivery of emergency medical services by assisting in development and evaluation of educational programs to train EMTs, establishing qualifications for eligibility for applying for certification, preparing and conducting examinations designed to ensure the competence of EMTs, establishing a system of recertification every two years, establishing procedures for revocation of certification for cause, and maintaining a national directory of registered EMTs.

Certification is dependent on competency according to recommended standards at three progressive levels. Of the three competency levels for which this establishment tests, the EMT\AMBULANCE is least intrusive. The second level, the EMT\INTERMEDIATE, requires more skill and competency than the EMT\AMBULANCE, yet not as much as the EMT\PARAMEDIC, the highest level. It is assumed the higher skill levels will encompass all lower skill levels. All EMTs work under the direct supervision of a physician.

Approximately 42,000 persons are examined per year for competency at the BASIC level. At the INTERMEDIATE and PARAMEDIC level, there are approximately 10,000 persons tested each year. Pass rate at the BASIC level is about 74%. Pass rates at the INTERMEDIATE and PARAMEDIC levels range from 68% to 71%.

## PERSONNEL POLICIES

This establishment in its determination of adequate program guidelines and certification does not get involved in hiring of EMTs, thus personnel policies for this establishment will not be addresses.

## EXAMINATION FOR CERTIFICATION

For the purpose of evaluation and subsequent certification, this establishment administers both written and practical examinations.

The written examination containing 150 questions, generally allows up to two and one half hours for completion. Written examinations are based on materials learned in the EMT/Paramedic training programs. Content is based on expected skill acquisition at the level for which the candidate is tested. For the EMT/Ambulance, content covers: patient handling and transportation, anatomy/physiology, patient assessment, breathing, resuscitation, cardiac arrest and cardiopulmonary resuscitation, soft tissue injuries, bleeding shock, pneumatic counter pressure device, medical emergencies, injuries to the head, face, neck, spine, chest, abdomen and genitals, fractures and dislocations, environmental emergencies, burns, hazardous materials, emergency childbirth, and psychological aspects of being an EMT.

The written examination for the EMT/Intermediate is composed of 150 multiple-choice questions covering all areas encompassed at the EMT/Ambulance level. In addition, roles and responsibilities, EMS systems, medical/legal considerations, medical terminology, EMS communications, patient assessment, airway management and ventilation, and the assessment and management of shock are covered.

The written examination for the EMT/Paramedic also contains 150 questions which cover all skill and knowledge expectancies of the two previous levels. It also assesses knowledge of the pre-hospital environment, preparatory, trauma, medical cardiology, OB/GYN, neonatal, and behavioral emergencies. All written examinations are controlled and monitored by designated examiners. All answers are recorded on answer sheets. Directions for test use are written on backs of test booklets and are provided orally at examination sites. All booklets must be returned at the end of the test. The written examination appears to be directly related to curriculum guidelines designed to accomplish competency at the various levels.

The practical part of the examination is set up to simulate actual emergency and life-threatening situations; it assesses skill acquisition in terms of knowledge of emergency procedures; one's ability to stay calm in stressful situations; one's ability to attend to minute, but important details; and, above all, one's ability to integrate information quickly, regarding a patient's condition, and prioritize as to what is the most effective treatment for each patient's unique needs. Participants in the practical examination are expected to demonstrate proper use of various equipment and techniques, to include the Kindrich Extrication Device using a life model; intravenous therapy using mannequins, and the use of defibrillation/cardiac monitoring equipment.

Participants are also required to respond orally in assessing trauma situations. Finger dexterity, with the ability to manipulate small items such as intravenous needles, is assess by observation. The ability to read graphs, operate life-saving equipment, read medication dosages, determine dosages based on patient's weight, listen to breathing patterns, and the ability to see all associated activity are areas which are evaluated.

## ENVIRONMENTAL CONDITIONS

In the analyst's opinion, the general environment conditions in which an EMT works could not be adequately assessed in an indoor evaluative environment. EMT/Paramedics in actual situations are exposed to a variety of hot and cold temperatures and may be, at times, exposed to hazardous fumes. They may be required to walk, climb, crawl, bend, pull, push, or lift and balance over less than ideal terrain. EMT/Paramedics are exposed to a variety of noise levels, which at times can be quire high, particularly when multiple sirens are sounding.

## WORKER CHARACTERISTICS

EMT/Paramedics work as part of a team. Thorough knowledge of theoretical procedures and ability to integrate knowledge and performance into practical situation are critical. Self-confidence, emotional stability, good judgement, tolerance for high stress, and a pleasant personality are also essential characteristics of the successful EMT at any level. EMTs also must be able to deal with adverse social situations which include responding to calls in districts known to have high crime rates.

## PHYSICAL DEMANDS

Aptitudes required for work of this nature are good physical stamina, endurance, and body condition which would not be adversely affected by having to lift, carry, and balance at times, in excess of 125 pounds (250, with assistance). EMT/Paramedics must be able to work twenty-four hour long shifts. Motor coordination is necessary because over uneven terrain, both the patients' and the EMT/Paramedics', as well as other workers, well-being must not be jeopardized.

## COMMENTS

Driving the ambulance in a safe manner, accurately discerning street names through map reading, and the ability to correctly distinguish house numbers or business locations are essential to task completion in the most expedient manner possible. Use of the telephone for transmitting and responding to physician's advice is also essential. The ability to concisely and accurately describe orally to physicians and other concerned staff one's impression of patient's condition is critical as EMT/Paramedics work in emergency conditions in which there may be no time for deliberation. EMT/Paramedics must also be able to accurately summarize all data in the form of a written report. Verbal and reasoning skills are used more extensively than math. Math does play a part, however, in determining medication ratios per patient's body weight.

## JOB ANALYSIS SCHEDULE

1. **ESTABLISH JOB TITLE**: Emergency Medical Technician (Medical Services) EMT/Ambulance, EMT/Intermediate, EMT/Paramedic.

2. **INDIVIDUAL ASSIGNED**: Cathy Cain

3. **CODE 079026 WTA Group**: Occupations in medicine and health

4. **JOB SUMMARY**: Administers life support care to injured and sick persons in pre-hospital settings as authorized and directed by physician. Assesses nature and extent of injury or illness to establish and prioritize medical procedures to be followed.

5. **WORK PERFORMED RATINGS**:

| Worker Functions | Data | People | Things |
|---|---|---|---|
| 3 7 4 | | | |

Work Field: 930

M.P.S.M.S: 939 Medical and other health services. (Materials, Products, Subject Matter, and Services)

6. **WORKER TRAITS RATINGS**:

Scale: Level 6, highest level; level 1, lowest level.

G.E.D. 1 2 3 4 5 6

General Education Development

Overall Rating - Level 4

**Reasoning development (R)**

Level 4 - Apply principles of rational systems to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Interpret a variety of instructions furnished in written, oral, diagrammatic, or schedule form.

*NOTE: There appears to be components of level 5 in terms of dealing with several abstract and concrete cartable. There were not enough components to rate this as a level 5.

**Mathematical development (M)**

Level 3 - Compute discount, interest, profit, and loss; commission, markup, and selling price; ratio and proportion and percentage. Calculate surfaces, volumes, weights, and measures.

**Language development (L)**

Level 4 - Reading: Reads novels, poems, newspapers, periodicals, journals, manual, dictionaries, thesauruses, and encyclopedias.

**Writing**: Prepare business letters, expositions, summaries, and reports, using prescribed format and conforming to all rules of punctuation, grammar, diction, and style.

**Speaking**: Participate in panel discussions, dramatizations, and debates. Speak extemporaneously on a variety of subjects.

*NOTE: In the analyst's opinion, the General Educational Development level appears to be an area in which skill levels could be separated, particularly the math. Precise reading of medications, however, is essential, i.e., Tylenol vs. Tegretol.

SVP: 1 2 3 4 5 6 7 8 9

Special Vocational Preparation (Time requirement)

Level 4 - Over three months and including six months (BASIC)

Level 5 - Over six months and including one year (INTERMEDIATE and PARAMEDIC).

Aptitudes: G 3 V 3 N 3 S 3 P 2 Q 2/3 K 2 F 1/2 M 2 E 2 C 1

Scale: Level 1, highest degree of particular aptitude; level 5, lowest degree of particular aptitude.

**G - Intelligence**

Level G-3:1 Renders general nursing care to patients in hospital, infirmary, sanitarium, or similar institutions:

Intelligence is required to learn and apply principles of anatomy, physiology, microbiology, nutrition, psychology, and patient care used in nursing; to make independent judgements in absence of doctor; and to determine methods and treatments to use when caring for patients with varying illnesses or injuries.

**V - Verbal Aptitude**

Level V-3:9 Questions patients to obtain their medical history, personal data and to determine if they are allergic to dental drugs or have any complicating illnesses. Converses with patient in reassuring manner; explains post-operative care, oral hygiene, and importance of preventative dentistry to patients.

**N - Numerical Aptitude** (The ability to perform arithmetic operations quickly and accurately)

Level 3 - No illustrations in paramedic field.

Level N-3:2 Treats patients with disabilities, disorders, and injuries to relieve pain, develop or restore function, and maintain maximum performance, using physical means such as exercise, massage, heat, water, light, and electricity as prescribed by physician:

Numerical aptitude is required to interpret clinical tests such as range of motion, muscle response, and functional tests to ascertain extent of physical loss; to determine intensity and duration of manual or mechanical therapy treatment or procedures such as weight lifting, diathermy, traction, or electro-therapy.

**S - Spatial Aptitude**

Level S-3:1 Treats patients with disabilities, disorders, and injuries to relieve pain, develop or restore function, and maintain maximum performance, using physical means such as exercise, massage, heat, water, light, and electricity, as prescribed by doctor:

Spatial aptitude is required to visualize anatomic positions and the relationship between the point of forces and the area affected (as in traction); and to place treatment devices or administer manual treatment in relationship to the affected body part.

**P - Form Perception**

Level P-2:6 Diagnoses and treats diseases and disorders of animals. Ability to make visual comparisons and discriminations and see slight differences in shapes and shadings of figures and widths and lengths of lines. Form perception is required to perceive pertinent details of size, shape, and form in skeletal structure, organs, tissue, and specimens of various animals.

## Q - Clerical Perception

Level Q-2:19 (for Paramedic and Intermediate) - Renders general nursing care to patients in hospital, infirmary, sanitarium, or similar institutions:

Notes pertinent detail in written instructions, especially amounts and strengths of medications to administer; accurately perceives numbers when reading instruments, preparing medications, and filling syringes for injections; accurately records data on patients' charts such as temperature, respiration, pulse count, blood pressure, medications and dosage administered.

Level Q-3:3 (for Basic) - Prepares and compiles records in hospital nursing unit, such as obstetrics, pediatrics, or surgery.

Clerical perception is required to post information to patients' charts from doctors' and nurses' notes and laboratory reports; to file charts in chart racks; to make up daily diet sheet for unit; and to maintain inventory of drugs and supplies.

## K - Motor Coordination

K-2:5 Renders general nursing care to patients in hospital, infirmary, sanitarium, or similar institutions:

Coordinates vision and finger and hand movements to give injections with hypodermic needle, medication, position or remove dressings, and to measure medicines.

## F - Finger Dexterity

F-1:2 (Intermediate and Paramedic) - Performs surgical operations upon human body:

Finger movements of one hand are required to locate broken or cut blood vessels, to position vessel and place ligature about it, and to tie one of several types of knots in ligature to stem flow of blood from vessel.

F-2:8 (Intermediate and Paramedic) - Performs chemical, microscopic, and bacteriological tests to provide data for use in treatment and diagnosis of disease:

Finger dexterity is required to use fingers to tie tourniquet about upper arm, locate vein below tourniquet near surface of skin; insert needle into vein; release tourniquet; and withdraw plunger of syringe to obtain amount of blood required for type of test to be performed.

No description for Basic, however, Level 2 is recommended due to ability to wrap bandages and apply splints.

**M - Manual Dexterity**

Level M-2:12 Renders general nursing care to patients in hospital, infirmary, sanitarium, or similar institution. Controls and extinguishes fires, protects life and property, and maintains equipment as volunteer or employee of city, township, or industrial plant. Manual dexterity is required during emergency situations, in positioning ladders and nets; clasping rungs to climb ladders; and in giving artificial respiration.

**E - Eye-Hand-Foot Coordination**

No description given. Level 2 recommended as job may require balancing of ladders, stairs, or on uneven terrain while carrying patient. Eye-Hand-Foot coordination required to permit ambulance operation and balancing, lifting, positioning, and transporting patient.

**C - Color Discrimination**

C-1:4 Performs surgery to correct deformities, repair injuries, prevent diseases, and to improve functions in patients:

Uses color discrimination and color memory in making diagnosis of patients' affliction or condition, by recognizing any deviations in color of diseases tissue from healthy tissue; evaluating color characteristics such as hue and saturation of affected body parts; and making determination as to extent or origin of condition.

Temperaments D F I J M P R S T V

J - Adaptability to making generalizations, evaluations, or decisions based on sensory or judgmental criteria.

M - Adaptability to making generalizations, judgements, or decisions based on measurable or verifiable criteria.

P - Adaptability to dealing with people beyond giving and receiving instructions.

S - Adaptability to performing under stress when confronted with emergency, critical, unusual, or dangerous situations; or in situations in which working speed and sustained attention are 'make or break' aspects of the job.

T - Adaptability to situations requiring the precise attainment of set limits, tolerances, or standards.

V - Adaptability to performing a variety of duties, often changing from one task to another of a different nature without loss of efficiency or composure.

Interests 1a 1b 2a 2b 3a 3b 4a 4b 5a 5b

2b - A preference for activities of a scientific and technical nature.

4b - A preference for working for the presumed good of the people.

Physical Demands S L M V 2 3 4 5 6

Explanation of terms:

1. Strengths
2. Climbing and/or balancing
3. Stooping, kneeling, crouching and/or crawling
4. Reaching, handling, and fingering and/or feeling
5. Talking and hearing
6. Seeing

Environmental Conditions I O B 2 3 4 5 6 7

Explanation of terms:

1. Work location (1 = Indoors, O = Outdoors, B = Both)
2. Extreme cold, with or without temperature changes
3. Extreme heat, with or without temperature changes
4. Wet and/or humid
5. Noise and/or vibration
6. Hazards
7. Atmospheric conditions

## U.S. DEPARTMENT OF LABOR
## MANPOWER ADMINISTRATION

### Physical Demands and Environmental Conditions

ESTAB. JOB TITLE EMT-Paramedic ESTAB. & SCHED. NO.
DOT TITLE & CODE 079.010

Code: F = Frequently
O = Occasionally
NP = Not present

### PHYSICAL DEMANDS

**1. STRENGTH**

| | | |
|---|---|---|
| a. | Standing | 45% |
| | Walking | 50% |
| | Sitting | 5% |

| | | |
|---|---|---|
| b. | Lifting | F |
| | Carrying | F |
| | Pushing | O |
| | Pulling | O |

### COMMENTS

1a. Very little time is spent sitting down, except for incident report writing.
1b. EMTs are required to assist in lifting and carrying injured or sick persons to ambulance, removal from ambulance, and into emergency care setting.

| | | |
|---|---|---|
| 2. | **CLIMBING** | F |
| | **BALANCING** | F |

### COMMENTS

2. Climbing and balancing are required for safe transport of patient.

| | |
|---|---|
| 3. **STOOPING** | F |
| **KNEELING** | F |
| **CROUCHING** | F |
| **CRAWLING** | F |

**COMMENTS**

3. Patients are often found injured or sick in locations where removal is possible only through EMT's stooping, kneeling, crouching, or crawling.

| | |
|---|---|
| 4. **REACHING** | F |
| **HANDLING** | F |
| **FINGERING** | F |
| **FEELING** | F |

**COMMENTS**

4. Transporting life saving equipment, arm extension, handling carefully patients in fragile conditions, feeling to assess vital signs are part of the nature of this position.

| | |
|---|---|
| 5. **TALKING** | |
| Ordinary | F |
| Other | NP |
| **HEARING** | |
| Ord. Conv. | F |
| Other Sounds | F |

**COMMENTS**

5. Responding to patients, physicians, and co-workers through hearing is necessary in transmitting patient information and following directions.

| | |
|---|---|
| 6. **SEEING** | |
| Acuity, Near | F |
| Acuity, Far | F |
| Depth Perception | F |
| Accommodation | F |
| Color Vision | F |
| Field of Vision | F |

**COMMENTS**

6. Sight is used to drive ambulances, distinguish landmarks, and visual inspection of patients.

**RATINGS**: S L M H VH 2 3 4 5 6

**Analyst** Cathy Cain **Date** 1/25/92 **Estab. Reviewer**
**Reviewer Date Title Date**

7. **GENERAL EDUCATION**: High School graduate or equivalent. Must be at least 18 years old.

8. **VOCATIONAL PREPARATION**:

a. College: None, however, some EMT courses are taught at local colleges.

b. Vocational Education Courses: For EMT/Ambulance - 110 hours specialized training. For EMT/Intermediate -90 -110 additional hours specialized training. For EMT/Paramedic - 750 - 1,000 additional hours specialized training.

c. Apprenticeship: None

d. Implant Training: None

e. On-the-Job Training: During course of training, students will have engaged in various clinical experiences in supervised hospital and field settings. Amount of time spent varies.

f. Performance on Other Jobs: None

9. **EXPERIENCE**: None

10. **ORIENTATION**: None

11. **LICENSES, ETC.**: Certification or Licensure

## 12. RELATION TO OTHER JOBS AND WORKERS:

Promotion: From EMT/Ambulance to EMT/Intermediate to EMT/Paramedic (based on training)

Transfers: None

Supervision Received: Physicians

Supervision Given: None

## 13. MACHINES, TOOLS, EQUIPMENT, AND WORK AIDS:

Ambulance, radio/telephone, extrication devices, cardiac monitors, defibrillator, electrocardiograph, intravenous tubing, injection needles, pneumatic ant-shock garments, stretchers, "jaws-of-life".

14. **MATERIALS AND PRODUCTS**: Intravenous fluids, bandaging tape.

## ATTACHMENT 6

## Examination Accommodations

## Disability Policy

The National Registry of EMTs offers the following recommendations regarding the EMT program application process:

The National Registry of EMTs recommends that all applicants to EMT programs complete an aptitude test battery (e.g. General Aptitude Test Battery (GATB), Differential Aptitude Test (DAT) and a standardized achievement measure (e.g. Woodcock Johnson-Revised Tests of Achievement; Wide Range Achievement Test-Revised). Such measures assess many of the capacities and abilities necessary to competently perform the responsibilities of the EMT such as: general learning ability; verbal numerical and spatial ability; form and clerical perception; motor coordination; finger and manual dexterity; eye-hand-foot coordination; color discrimination. In instances where test barriers are not administered prior to admission to EMT training programs, NREMT recommends that such tests be administered at appropriate times as determined by state/training program policies. The National Registry also recommends that vocational counselors be available to applicants to interpret the results of the testing and provide guidance in terms of the advisability of proceeding with the EMT training program.

## Eligibility for Accommodations for Registration Due to Disability

The National Registry of EMTs will offer reasonable and appropriate accommodations for the written component of the registration examination for those persons with documented disabilities.

### I. Learning Disabilities

Those persons requesting accommodations for the written component of the registration examination must submit documented evidence of a learning disability prior to the examination. Based upon a thorough analysis of the written examination it has been determined that persons with learning disabilities manifested in the academic areas of reading decoding or reading comprehension may be eligible for special test accommodations. Other areas in which learning disabilities may be evidenced (e.g. mathematics calculations, mathematics applications, written expression, oral expression, listening comprehension) should not negatively impact upon one's performance on the written examination due to the format (multiple choice) and content.

Documentation of a specific learning disability must include one of the following:

1. Evidence of a previously documented learning disability which would negatively impact one's performance on the written examination, specifically in the reading areas (i.e. reading decoding or reading comprehension). Such documentation must include at least one of the following:

A. Diagnosis of a learning disability in the area of reading decoding and/or reading comprehension based upon the results of standardized psychoeducational assessment including an appropriate standardized measure of achievement in reading decoding and/or reading comprehension. A learning disability is defined as one of the following: 1) standard scores in reading decoding and or reading comprehension which are ar least one standard deviation below the score obtained on the standardized test of intelligence; 2) evidence that an achievement ability discrepancy was not obtained due to some aspect of the learning disability such as a statistically significant abnormal discrepancy between Verbal and Performance abilities on the Wechsler Adult Intelligence Scale - Revised. Results of previous and currently valid psychoeducational evaluations will be accepted as evidence. However, if no such assessment has been conducted, then the applicant is responsible for obtaining such documentation before any decision can be made by the National Registry of EMTs regarding the applicant's request for special accommodations; 3) a statistically significant deficit in some area of cognitive processing which would impact one's ability to successfully complete the NREMT examination as written. Such cognitive processing deficits should be documented through appropriate standardized testing.

2. School and/or work records which demonstrate that special education services or accommodations were provided due to a learning disability in the area of reading decoding and/or reading comprehension. Appropriate documentation of the learning disability will also be required.

Requests for accommodations on the NREMT written examination will be reviewed by a panel of consultants on a case-by-case basis. Accommodations on the written examination will be considered for those persons who meet the minimum standards for performance as determined by analysis of the requirements of the job as documented by standardized assessment measures. Please contact the National Registry for further information regarding minimum standards for performance.

## Types of Accommodations

The types of accommodations which may be requested by persons qualifying for special accommodations on the written examination due to documented learning disability are as follows:

National Registry of EMTs
Policy and Procedures

1. The National Registry of EMTs will permit those persons who qualify for special accommodations on the written examination due to documented learning disability (as described above) to take the standard format of the examination but receive an extended amount of time in which to complete the examination. Applications selecting this option will normally receive 3.75 hours versus the standard 2.5 hours.

2. Other appropriate accommodations may be granted with appropriate documentation of disability as deemed appropriate by a panel of consultants.

### Contextual (When, Where, Why)

The student will use this information throughout the course to enhance his understanding and provide direction for the EMT-Basic's relationship to the individual components of the EMS system. The lesson will provide the student with a road map for learning the skill and knowledge domains of the EMT-Basic. Additionally, this lesson will identify that not all students meet the mental and physical requirements of the career field. After completion of the course, the EMT-Basic will use this information to understand the process of gaining and maintaining certification, as well as understanding state and local legislation affecting the profession. This lesson sets the foundation for the remaining teaching/learning process. A positive, helpful attitude presented by the instructor is *essential* to assuring a positive, helpful attitude from the student.

## STUDENT ACTIVITY

### Auditory (Hear)

1. Students will hear specifically what they can expect to receive from the training program.
2. Students will hear the specific expectations of the training program.
3. Students will hear actual state and local legislation relative to EMS practice and certification.

### Visual (See)

1. Students will see audio-visual aids or materials explaining the components of the health care system, EMT-Basic level of care, EMT-Basic's roles and responsibilities, professional attributes, and certification requirements.
2. Students will receive a copy of the cognitive, affective and psychomotor objectives for the entire curriculum.
3. Students will receive the final skill evaluation instruments.

### Kinesthetic (Do)

1. Students will practice situations in which EMT-Basics portray professional attributes and experience ethical dilemmas.
2. Students will complete the necessary course paperwork.
3. Students will indicate if they will require/request assistance during the course or certification process based on the Americans with Disabilities Act. Additionally, students will provide the necessary documentation to support the requirements/request.

## LAWS OF LEARNING: "THEY SAID..."

In scientific or educational terminology, an observation that has been so widely and frequently confirmed that it is universally accepted is call a "law." Below, you will find a list of the laws of learning. They are presented here as capsule reminders of what happens in the minds, hearts, and guts of learners during the learning process.

In teaching and learning, all things being equal:

A. Learning will frequently be determined by biases the individual has. (Prior contradictory learning makes new learning much tougher and requires great patience on the part of the instructor while the student struggles with old concepts to which s/he has committed him/herself.) (Law of Mind-set)

B. First impressions are vital and lasting. (Law of Primacy)

C. Learning occurs best when the student is ready—physically, mentally and emotionally. (Law of Readiness)

D. Students will tend to repeat behaviors which have pleasant consequences. (Law of Readiness)

E. Up to a point, anxiety increases learning; beyond it is detrimental. This point varies from student to student and situation to situation. (Law of Anxiety)

F. New learning occurs best when related to already known material (as long as the new and old information aren't contradictory). (Law of Intensity)

G. Vivid, dramatic experiences are more likely to be remembered. (Law of Intensity)

H. Retention is best when there is active involvement on the part of the learner. (Law of Exercise)

I. The more times a thing is repeated, the more likely it is to be learned. (Practice makes perfect? Practice makes permanent. *Perfect* practice makes perfect!) (Law of Repetition)

J. Forgetting is thought to be caused by interference—old knowledge destructively mingling with new knowledge. (Retroactive interference occurs when new learning interferes with the recall of old learning. Proactive interference is when old knowledge interferes with the recall of new knowledge. Interactive interference is when old and new knowledge interfere with the recall of intermediate knowledge. Reactive interference is the negative effects of attitudes or feelings on remembering.) (Laws of Interference)

## DOT INSTRUCTOR TRAINING PILOT COURSE

## PRE-REGISTRATION FORM

Course Preference (1 indicates first choice; 2 second): _____ Gaston
_____ Rowan

If at all possible, we will get all students into their first choice for course location. If you only will consider taking the course at your first choice location, please mark only your first choice above.

Student Name:

Student Address:

Phone: Day:________________ Night:______________

Provider Affiliation:

Position Currently Held:

Provider Address:

Current Certification Level:

| | |
|---|---|
| ____ EMT-A | ____ EMT-P |
| ____ EMT-D | ____ EMT-AI |
| ____ EMT-I | ____ Other:__________ |

Other Current Certifications: (PALS, ACLS, BTLS, etc.):

Please describe the number and types of courses you have taught in the past 3 years. Include the name of the agency(ies) for which you have taught.

Continued on Next Page

Have you had any courses in teaching methodologies before: ____ Yes
____ No

If yes, please give course title(s) and when and where you took it:

Sponsorship:

I (print name), ________________________________________ agree that the student submitting this pre-registration is an appropriate candidate for the DOT Instructor Training Program pilot being held October 12, 13, 14, 26, and 27, 1995 and recommend them for participation in this course.

Signature: ________________________________

Title: ________________________________

Agency: ________________________________

Phone: ________________________________

Pl;ease return the pre-registration form ASAP to:

Rebecca R. Yarbrough
Emergency Services Program Administrator
Centralina Council of Governments
Post Office Box 35008
Charlotte, NC 28235

## GIVING INSTRUCTIONS

As instructors, we give the students in our courses tasks to accomplish, in the form of assignments, activities, and projects. In EMS instruction, those tasks often simulate on-the-job duties that the EMS student will perform. These guidelines for giving instructions apply to both situations.

1. INTRODUCE THE TASK WITH A RATIONALE. Explain from the learner's point of view, why the material they are about to learn is important to them. This explanation helps participants get ready to work.

2. EXPLAIN THE TASK. Describe the activity learners will participate in. The task description tells what they will do. For more difficult or complex tasks, you may need to provide a teaching aid, such as a checklist, overhead, or handout.

3. SPECIFY THE CONDITIONS. This helps learners accomplish the learning by defining the limits of the task. The context specifications tell them how they will do the work, e.g., as a team or individually. The conditions also specify what the outcome(s) will be and what constitutes successful completion.

4. EXPLAIN HOW RESULTS WILL BE USED. Tell the learner how the outcomes of this task relate to the overall goals that are being accomplished.

   In the classroom, tell participants whether the results from a task should be reported back to the main group, used in another activity, processed within the small group, or are for individual reference.

## DEMONSTRATION CHECKLIST

### Preparation of the Trainee

___ Put the learner at ease

___ Covered the necessary background information

___ Got him or her interested and willing to learn

### Demonstration

___ Procedure visible to all students

___ Steps clearly identified and explained

___ Stressed key points

### Practice

___ Had the learner explain key points

___ Corrected errors

___ Demonstrated competence in the use of corrective feedback

___ Repeated instructions as necessary

### Summary

___ Summarized the main points of the lesson

___ Asked for further questions

# BEHAVIORAL TERMS FOR WRITING OBJECTIVES

- Add
- Analyze
- Answer
- Apply
- Arrange
- Ask
- Assemble
- Assist
- Bisect
- Categorize
- Choose
- Classify
- Compare
- Compute
- Construct
- Convert
- Criticize
- Defend
- Define
- Demonstrate
- Design
- Detect
- Develop
- Diagram
- Differentiate
- Discuss
- Distinguish
- Draw
- Estimate
- Extrapolate
- Generate
- Identify
- Illustrate
- Indicate
- Install
- Interpolate
- Label
- Locate
- Manipulate
- Match
- Measure
- Name
- Operate
- Order
- Organize
- Outline
- Perform
- Plan
- Predict
- Practice
- Prepare
- Present
- Produce
- Recall
- Recognize
- Reconstruct
- Reduce
- Remove
- Revise
- Select
- Share
- Show
- Solve
- Sort
- Specify
- State
- Suggest
- Support
- Synthesize
- Tabulate
- Time
- Transfer
- Translate
- Transmit
- Validate
- Verbalize
- Verify
- Weigh
- Write

## ABCD...QUESTIONS TO ASK ABOUT YOUR OBJECTIVES

**Audience**

Have I specified for whom the objective is intended?

Yes No

If no, who is the trainee? Specify the trainee in the objective.

**Behavioral**

Have I stated an observable behavior, which describes what the trainee will do (in the "real world") after instruction?

Yes No

If no, what will the trainee do? Specify the behavior in the objective (see Handout 2 for help).

**Conditions**

Have I described the learning environment and tools which will be provided to the trainee in order to be able to perform the behavior?

Yes No

If no, what equipment, tools, aids or references (if any) will the trainee be able to use? Are there other special conditions (e.g. outside, in the heat of fire, etc.) List those tools and conditions in the objective.

**Degree**

Have I stated the standards for measuring acceptable performance?

Yes No

If no, what are the time limits, percentages/ranges of accuracy, number of correct responses, or other qualitative standards for performance? State them in the objective.

## COURSE EVALUATION

PURPOSE: It is our objective to present a useful and effective training course. You are the final authority on whether that objective has been met. Your completion of this form, therefore, will play an important part in our future planning. Please do not feel bound to limit your remarks to questions on this form. Your comments on any aspect of the course will be appreciated.

**Course** INSTRUCTOR TRAINING COURSE

**Dates**

| RESPONSES (Check the response closest to your opinion) | | Strongly Agree | Agree | Disagree | Strongly Disagree | Not Applicable |
|---|---|---|---|---|---|---|
| 1. Course material was | a. Well organized | | | | | |
| | b. Complete and appropriate | | | | | |
| | c. Readable (printed well) | | | | | |
| 2. Audio visual materials were: | a. Related to the course | | | | | |
| | b. Good quality | | | | | |
| | c. Sufficient in number | | | | | |
| 3. Course | a. Was a reasonable length | | | | | |
| | b. Was worth recommending to others | | | | | |
| | c. Contributed to my knowledge and skills | | | | | |
| | d. Accomplished announced purpose | | | | | |
| 4. Instruction | a. Subject was thoroughly covered | | | | | |
| | b. Course objectives were clear | | | | | |
| | c. Exercises were appropriate | | | | | |
| | d. Time in class was spent effectively | | | | | |
| | e. Participation was encouraged | | | | | |
| 5. Classroom | a. Was comfortable | | | | | |
| | b. Included a manageable number of students | | | | | |
| | c. Was appropriate for this course | | | | | |
| 6. Instructor | a. Was prepared for class | | | | | |
| | b. Stimulated my interest in subject area | | | | | |
| | c. Made course a worthwhile learning experience | | | | | |

Remarks

BEST COPY AVAILABLE

## COURSE EVALUATION (Continued)

7. Overall instructor evaluation (Check your opinion)

|  |  |  |  |  |
|---|---|---|---|---|
| a. Knowledge of the subject | ☐ excellent | ☐ good | ☐ fair | ☐ poor |
| b. Ability to teach | ☐ excellent | ☐ good | ☐ fair | ☐ poor |

8. Would you add or emphasize any subject matter areas in subsequent course sessions?

☐ No ☐ Yes, list these areas and give your reasons.

9. Would you delete or de-emphasize any subject-matter areas?

☐ No ☐ Yes, list these areas and give your reasons.

10. Other comments. Please provide any comments, either general or specific, that you would like to make relative to this course.

| Signature and Title | Organization | Date |
|---|---|---|
|  |  |  |

## EPINEPHRINE AUTO-INJECTOR

| | Points Possible | Points Awarded |
|---|---|---|
| Takes or verbalizes body substance isolation | 1 | |
| Contacts medical direction for authorization | 1 | |
| Obtains patient's auto-injector | 1 | |
| Assures injector is prescribed for the patient | 1 | |
| Checks medication for expiration date | 1 | |
| Checks medication for cloudiness or discoloration | 1 | |
| Removes safety cap from the injector | 1 | |
| Selects appropriate injection site (thigh or shoulder) | 1 | |
| Pushes injector firmly against site | 1 | |
| Holds injector against site for a minimum of ten (10) seconds | 1 | |
| Properly discards auto-injector | 1 | |
| Verbalizes monitoring the patient while transporting | 1 | |
| **TOTAL:** | 12 | |

**CRITICAL CRITERIA:**

___ Did not contact medical direction for authorization
___ did not check medication for prescription, cloudiness or discoloration
___ Did not use an appropriate injection site
___ Used the injector against the injection site for ten (10) seconds or longer
___ Did not discard auto-injector into appropriate container

# INSTRUCTIONAL METHODS

| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| **PRESENTATION FORMS** | | | | | |
| **Lecture** | Instructor presents concepts and methods or demonstrates skills. | Presenting new material. | High instructor control<br>Less time consuming | Limited opportunities for interaction<br>Decreased retention. | 1. Keep it brief.<br>2. Enhance with visual aids.<br>3. Plan regular opportunities for interaction (including strategies below). |
| **Reading Assignments** | Trainees read material before or during class. | Before Class-highly motivated trainees in familiar subject area.<br>During Class-Brief items-anecdotes for discussion or background for exercises. | Before class - Allows trainees to learn material at their own pace. Covers pre-requisites.<br>During-Avoids instructor read aloud and gives trainees point of reference during exercises. | Cannot ensure that material will be read prior to class. Perceived as burden by trainees.<br>During Class-Can be time consuming. Low interactivity. | 1. Choose before-class reading only when absolutely necessary. Enlist supervisor support and require written exercise to enhance memory.<br>2. Keep in-class reading brief and practice or discussion related. Check on comprehension (ask for summary) and allow enough time for trainees who read more slowly. |

| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| **DISCUSSION FORMS** | | | | | |
| **Structured Inquiry** | Instructor asks questions or poses problems to guide the session. | Exploring implications of material presented or enhancing lecture. | Moderately interactive.<br>Moderate instructor control.<br>Allows trainees to "drive" presentation. | Frustrating if there is only one right answer or if trainees don't know answers.<br>Participation concentrated among most confident trainees. | 1. Plan for questions as part of your presentation.<br>2. Choose questions that have more than one correct response (e.g. lists) and that trainees are likely to know (review, personal experience).<br>3. Mix approaches: allow trainees to think about and write down responses, group discussion and response, round robins (everybody answers in turn). |
| **Discussion**<br>Whole Group and Small Group | Trainees address issues, ideas, applications, problems with questions or comments. | Solving problems, making decisions, encouraging group identity. | Highly interactive.<br>Strengthens group identity.<br>Fosters problem solving skills. | Participation concentrated among most confident trainees.<br>Can be time consuming. | 1. Choose whole group for narrow discussion topic or for important issues for the whole group.<br>2. Choose small groups for broader discussion, emotionally charged issues, and tasks.<br>3. Keep the goal clear.<br>4. Resist the temptation to become a group member. |

| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| DEMONSTRATION | | | | | |
| **Demonstration** | Instructor shows a process to be learned or the way something works | Presenting standard procedures and processes | High instructor control<br>Applies learning<br>Links instruction to applications | Time consuming<br>Can be difficult to view with large groups | 1. Create a viewing area that is visible to all students<br>2. Clearly identify all steps and stress key points<br>3. Ask learners to reiterate key points<br>4. Have learners practice and correct errors |
| SIMULATION | | | | | |
| **Role Plays**<br>**Simulations** | Role play – Trainees act the parts of other people in a dramatized situation.<br>Simulation-Trainees act as themselves in unfamiliar conditions or observe dramatized situations (as in videotape). | Practicing unfamiliar behavior, linking concepts presented to real situations, or awareness of results of behavior. | Intensive participation.<br>Fosters learning in the affective domain.<br>Facilitates transfer of learning. | Can be time-consuming.<br>Not useful if students do not participate fully. | 1. Give trainees a structure in the form of a case study or script and guidance in the form of modeling.<br>2. Process experience after role play, link to objectives and real-world situations. |
| **Experiential Learning** | Trainees reflect on experiences inside the training environment. | Thinking about or learning from group dynamics or behavior being modeled as in general class experience, team building exercise, simulation, or role play. | Highly interactive.<br>Moderate instructor control.<br>Classroom is model for trainees to use experimenting and discovering. | Emotional content requires advanced facilitation skills.<br>Risk of getting sidetracked.<br>Can be time-consuming. | 1. Focus. Know precisely what experiences trainees should reflect on and explain clearly how trainees should use the experiences.<br>2. Make sure learning is tied to objectives.<br>3. Be cautious of using emotionally charged experiences. |

| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| **Field Trips** | Trainees visit a site for instructional purposes. | Giving trainees exposure to a real-world setting. | Links instruction to conditions where it will be applied. | Time consuming.<br>Limited trainee participation.<br>Risk of getting side-tracked. | 1. Explain how trip is related to instructional objectives.<br>2. Give trainees something to do or observe at the site.<br>3. Follow up after trip to reinforce. |
| **COOPERATIVE LEARNING** | | | | | |
| **Brainstorming** | Group generates ideas without judging in a timed environment. | Stimulating new ideas.<br>Enhancing creativity. | Active participation.<br>Easy to prepare.<br>Encourages ownership of problem and solutions. | May confuse and frustrate if ideas are not used later. | 1. Instruct students to withhold judgment<br>2. Instruct students that quantity and variety are the goals, not quality.<br>3. Describe up front how ideas will be used and that not all ideas can be used. |
| **Team Development** | A formal attempt to improve the interaction of existing work groups | Building teamwork<br>Increasing cooperation<br>Decreasing destructive conflict | Addressees obstacles to new behavior<br>Encourages application, results | Time-consuming<br>Resistance/emotions may be high<br>Must be followed up | 1. Assess readiness of group for change.<br>2. Build and maintain support for effort.<br>3. Help team focus on communication and purpose of the group.<br>4. Require projects requiring team work, reflect using experiential learning.<br>5. Get commitment, action plans. |

| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| **Small group projects** | Structured, defined goal that must be accomplished through group effort | Clearly defined, product-oriented, multi-faceted learning, such as a report, model, or presentation | Increases collaborative learning<br>Draws on diverse experience and expertise of group<br>Fosters sense of accomplishment | Participation can be concentrated among most confident members<br>Can be time-consuming | 1. Clearly define desired outcomes<br>2. Help the group focus, develop specific goals, and determine milestones |
| **PROBLEM SOLVING** | | | | | |
| **Case Studies and Critical Incidents** | Case Study-Develops and distributes a written description of a problem or situation.<br>A critical incident is similar but very brief. | Simulating reality or experience so that trainees can apply instruction. | Intense participation.<br>Applies learning.<br>Stimulates thought.<br>Improves problem-solving skills | Case studies-can be time-consuming, can be difficult to write.<br>Critical incidents-lack of detail can lead to extended explanations, result in wide variety of responses. | 1. Rely on people with experience in the area for realistic cases, key components of success or failure, and for review for accuracy.<br>2. Link case or incident closely to instructional objectives. |
| **Games** | Structured situation involving competition between two or more people or groups. | Competition motivates trainees.<br>Cooperation builds group identity, team problem solving skills, awareness of dynamics. | High trainee participation.<br>Increases appeal of "dry" material (as in material reviewed during a game show quiz). | Can be time-consuming out of proportion to objective's importance.<br>Can be time-consuming to develop. | 1. Estimate time for game carefully, weight its value in supporting objective and the value of the objective.<br>2. Rely on concepts from familiar games. Consult books designed for use by trainers (e.g. "Games Trainers Play") |

| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| **In-Basket Exercises** | A timed case study or simulation, in which individuals are given an in-basket containing written memos, letters, or messages and are asked to take action. | Evaluates problem-solving, decision making skills.<br>Evaluates time management. | Requires active participation.<br>Limited instructor role. | Can be time-consuming, costly and difficult to develop.<br>Learning curve for students who are not familiar with this type of exercise. | 1. Collect real life examples (modified to protect privacy if necessary).<br>2. Give clear, specific instructions. Allow students to work on brief example. |
| **TUTORIAL** | | | | | |
| **Computer-Assisted Instruction** | Instruction assisted by a computer | Conveying information<br>Individualized instruction | Trainees work at their own pace<br>Trainees at different sites can be trained without travel<br>Trainees spend less classroom time, presentation and practice individually | Expensive<br>Time-consuming to develop properly | Evaluate costs and benefits of choice carefully.<br>Use full capabilities; avoid mimicking structure of traditional stand-up instruction.<br>Make visually appealing. |
| **One-on-one instruction** | Student is individually assisted by the instructor | Individualized instruction<br>Remediation<br>Guided practice | Trainees can learn at their own pace<br>Individual areas of difficulty can be dealt with very effectively | Expensive<br>Time-consuming | Use on an as needed basis<br>Maintain guidelines about when, where, and how long<br>Avoid favoritism<br>Avoid compromising situations |

## SAMPLE ACTION PLAN

The three most important things I learned in this course were:

- ________________________________________
- ________________________________________
- ________________________________________

People, things, and processes that will support me as I use my new skills (implementing new processes, applying new concepts):

________________________________________

________________________________________

People, things, and processes that may be obstacles to my using my new skills (implementing these new processes, applying these new concepts):

________________________________________

________________________________________

When I return to work, I will:

___ Schedule a meeting with my supervisor to discuss what I learned in this course.

___ Share my course materials with my supervisor.

___ Share my course materials with co-workers whose support I need.

___ Schedule an hour to review the course materials one month from today.

___ Schedule an hour to review this action plan three months from today and address any new unforeseen obstacles.

Other things that I can do to directly address obstacles to using what I have learned in this course:

________________________________________

________________________________________

## PREPARING TO TEACH

1. **Know the scope of the course.** Know what is covered and what is not. If you get questions outside the scope of the course, you will usually want to discuss them outside class to keep from losing uninterested class members.

2. **Know the depth of the course.** Know to what level of complexity each topic is developed. You want to be sure you are prepared to go into the appropriate amount of depth in your lecture and examples.

3. **Know the flow of the presentation.** You want to appear prepared and avoid getting into a side discussion now of a topic that is going to come up later when it will make more sense.

4. **Know the purpose of all the visuals.** Never say "I don't know what the person who designed this had in mind, but..."

5. **Estimate the timing** of each lecture, exercise or workshop.

6. **Work through each exercise** so it is fresh in your mind when you present it to the class and so you can be sure the solutions are correct. It is much easier to supervise an exercise in class when you know just what the participants are encountering.

7. **Do all the exercises.** This will help you to be sure everything will work in the environment where you are teaching, and so the details will be fresh in your mind.

8. **Anticipate questions, technical difficulties.**

9. **Make sure that the Instructor Guide matches the Participant Manual.**

## MINI-PRESENTATION CHECKLIST

Presenter: ______________________________

Subject: ______________________________

**Introduction**

- ___ Drew in the audience
- ___ Covered background information, if necessary

**Body of Presentation**

- ___ Made eye contact
- ___ Maintained open posture
- ___ Used movement and gestures appropriately
- ___ Spoke in understandable, clear tones
- ___ Delivery was poised and suited the topic
- ___ Material was logically organized
- ___ Stressed key points

**Summary**

- ___ Summation and closure were effective

What were this presenter's strengths?

Where might this presenter improve?

# TRAINING MEDIA REFERENCE

## Printed Materials

Let's look at two categories of printed materials: references and activity handouts.

**References.** Reference materials include instructor-provided *supplemental readings*. These can be distributed either prior to or during class. It is important to remember that as an instructor, you should choose reference materials that are directly relevant to information covered in class. Providing a frame of reference and/or highlighting specific learning outcome to be gained from the supplemental reading is critical.

*Job Aids* are designed to make required information easily accessible on the job. Job aids are particularly helpful as reminders for information or processes needed on a sporadic basis.

**Activity Handouts.** A wide variety of printed materials can be used to support classroom activities and enhance learning. *Case studies* are handed out as part of an exercise, and contain a synopsis of information used as the basis for a decision or analysis activity. *Study guides* direct students to important topics or provide needed information.

*Checklists* can be used during activities to provide students with criteria for evaluation. For example, during a practical exercise, students can be required to perform a specific task under the same conditions as a final test. A checklist can be provided detailing each step and performance standards. For this course, instructor trainees will use a checklist for preparing to instruct during their lesson presentations.

**Graphic Elements.** Pictures or graphics should directly pertain to the text they illustrate and, as stated, should be placed as near the related text as possible. Visuals should enhance understanding by communicating more effectively than words allow, such as a set of scales to describe the concept of "balance." If a concept could be best conveyed with a chart or graph, determine essential information, and note relationships between the parts. Keep visuals simple to avoid confusing your message, and direct attention to them with concise captions or questions in the text.

**Text Elements.** The most legible typefaces are sans serif styles. The size of the lettering is crucial when designing displays to be read from a distance. A common rule of thumb is to make lowercase letters one-half of an inch high for every ten feet. Instructors should take into account the projection factor for overhead transparencies or slides, and design accordingly.

## Presentation aids

**Transparencies.** Transparencies are probably the most widely-used teaching aid. They can be used to project either pictures or words, and are very effective for highlighting the main points of your lecture. They are usually easy for everyone to see, and they may be used without dimming the lights.

When designing transparencies, refer to lesson objectives and determine the most important content in order to target elements that should be emphasized. Decide exactly what the verbal message must communicate and try to be as concise as possible, yet still be understood. Avoid unnecessary "bells and whistles" such as three dimensional effects, especially if they make the material harder to read. Use lines and boxes to organize and divide the screen. A design element, such as a particular border or icon, or certain color combinations, used repetitively on successive transparencies/slides, creates unity and adds polish to the entire presentation.

Instructors should be aware of how long it will take an average viewer, unfamiliar with the content, to read the entire visual, and display it accordingly. Another option is to provide students with the visual in their printed materials.

**Charts/posters.** Charts/Posters are usually used to present complicated diagrams, to highlight a few main points, or to motivate and persuade. They are readily made, or procured, and can be displayed indefinitely, allowing students easy access for as long and often as necessary. Because charts and posters can be displayed indefinitely, their content can be more complex than the screen design for transparencies. For example, a labelled rendering of the human heart could be posted in the classroom.

Posters are often used to motivate and persuade. The use of asymmetrical arrangements, bold colors, eye-catching, simple pictures and straightforward text is most effective.

Unfortunately, charts and posters can become outdated or lose impact; therefore, this medium is particularly useful to present stable material.

**Slides (35 mm).** Slides (35 mm) can be used like transparencies to project either words or pictures, and produce excellent results with full color photographs. They require less actions to use than transparencies, since the projector does all the work. One disadvantage is that the lights must be dimmed.

**Flipcharts.** Flipcharts are included under prepared and spontaneous media because flipchart pages can be used either way, or in combination. One disadvantage of flipchart use is that the instructor must turn away from the class while writing. However, prior to class, the instructor can fill in major headings, draw boxes for a simple flow chart, or write out a sentence, leaving blanks. Later, during class, he/she can label the steps in the flow chart or fill in the blanks based on student input.

**Presentation aids (cont'd)**

**Film/video.** Films which are brief and pertinent to the subject matter provide a pleasant change of pace for the class. A significant drawback is the "prepackaged" nature of films. The content may not entirely dovetail with course concepts. Additionally, the lights must be dimmed and, if the film is lengthy, the audience may tend to lose energy, or even to fall asleep. Availability, cost, and use of equipment are also considerations.

**Simulation/props.** For practical exercises, props are an essential learning tool. Equipment that allows the students to experience, as closely as possible, actual on-the-job conditions is ideal. the use of props is especially appropriate for EMS instruction. Emergency Medical Technicians (EMTs) use many different pieces of equipment on the job. When students practice on actual or simulated equipment, mastery of skills increases. As an instructor, allow time for your students to practice with props.

**Computer-based programs.** Computer programs can be used to create screens for display, much like transparencies. Graphics, such as pie- and flow- charts, and the text and graphic elements common to transparencies can be easily created at a keyboard, stored as files, and then displayed to larger screens. Full color photographs can be scanned in, digitized, and stored as files, as well.

**Presentation software.** Software packages enable instructors to quickly and easily compile text, graphics, and pictures into an on-line presentation. Transitional devices, such as screen wipes, pushes, and fades, add sophisticated touches that enhance delivery. These presentations can be displayed on computers or through LCD display panels.

**LCD display panel.** An LCD display uses an overhead projector and an *LCD display panel* which connects to a computer. You show your presentation, which consists of electronic files instead of transparencies, via the computer. It is transmitted through the LCD display and projected in color. Digital files facilitate the rapid updating and reordering of material, and they can be transmitted electronically to remote locations. Digital images can be converted into a variety of forms, including hard copy, video, and CD-ROM, in addition to being pulled into a graphic or document file. However, this medium requires skills that may need to be trained or outsourced.

## HOW TO DESIGN TRANSPARENCIES

- Horizontal formats fit the size of the projected area best.
- Visual ideas should be communicated with pictures whenever possible. Use diagrams, charts, graphs, and pictures. If you have difficulty incorporating the picture and text, consider projecting just the picture, and using the board or flipchart to convey text.
- Confine your message to a single concept and use a simple, uncluttered design.
- A good rule of thumb is six words per line and six lines per transparency.
- Use key words as headlines to help the audience remember each point.
- Use letters at least 3/16-inch high. Check readability by laying the transparency on a white piece of paper on the floor. If you can read it from a standing position, the audience should be able to read it when projected.

## TIPS FOR OVERHEAD PROJECTION

- Use the same size frame for all of your transparencies.
- Tape a guide on the projector platform so that each image projects onto the same screen area
- Switch off the projector when you have finished referring to a particular transparency. This will shift the audience's attention back to you.
- Review the transparencies before the lesson to ensure they are in order and none are missing.
- Store transparencies in three-hole punch slip covers, in order, in a three-ring binder. Then just open the binder on the table next to the projector for easy access.
- Plan ways to add meaningful details to the transparency during projection. This adds spontaneity to the presentation.
- Reveal information one line at a time by placing a sheet of paper under the transparency.
- To present a complex idea in stages, layer up to four transparencies, one at a time.
- Lay pointers directly onto the transparencies. Any elevation will put the pointer out of focus and any slight hand movement will be greatly exaggerated on the screen.

## HOW TO OPERATE AN LCD PANEL

### Instructions for Set Up

- Position personal computer and overhead projector on the same study table of projection cart, or on adjacent tables or carts
- Place LCD panel on the overhead projector stage
- Be sure the power switch on the LCD panel is set in the OFF position
- Plug a power supply into the LCD panel and electrical outlet
- Connect computer to LCD panel. (see LCD panel instruction manual for specifics; the connection may require special cords)

### Operation

- Turn LCD power switch on
- Adjust LCD panel for best image
- Focus overhead projector on the projection screen
- Whatever appears on the computer monitor can now be projected onto the screen
- Although you can write on the LCD panel with water-based markers, covering it with clear acetate will protect the unit

## SUCCESSFUL SLIDE PRESENTATIONS

- Make certain your slides are in sequential order and right side up. Here's how:
    - ☐ Arrange in order and number sequentially.
    - ☐ Take the slides and hold it as it will be seen on the screen: right side up with the letters running left to right.
    - ☐ Place a spot (or number) on the bottom left corner.
    - ☐ This spot is referred to as the thumb spot. When you place the slide in the projector (upside down), your thumb will be on top of the spot.
- Use words on title frames to cue your audience to upcoming subject matter.
- Prepare in advance to illuminate your notes after the room lights are dimmed, if necessary.
- Limit verbal commentary to less than a minute, unless the visual is complex.
- Prepare a gray or black slide as a placeholder for lecture portions during your presentation, rather than holding an irrelevant slide on the screen.
- Consider including music to create a mood and capture attention.
- Begin and end with a black slide.
- Use a remote control device to advance slides. This allows you to stand to the side, maintain some eye contact with the audience, and keep an eye on the slides.

## TIPS FOR VIDEO AND FILM PRESENTATIONS

- Check the lighting, seating, and volume control to be sure that everyone can see and hear the presentation.
- Prepare students by briefly reviewing the lesson objectives related to the topic of the presentation.
- List the main points on the board before you start.
- Highlight major points after the presentation by adding them to the list.
- Remember that a smaller, brighter image is better than a large dim one. Move the projector closer to the screen or cover the windows with paper if necessary.
- Cue up the film or video so that the first image the audience sees is the title of opening scene.

# TROUBLESHOOTING

| EQUIPMENT | PROBLEM | POSSIBLE CORRECTION |
|---|---|---|
| **Overhead Projector** | No light after flipping switch | 1. Be sure projector is plugged into an electrical outlet<br>2. Turn the switch all the way on. Many overheads have a three-position switch: on, off, and fan.<br>3. If lamp is burned out, switch to spare lamp within projector if it has this feature. Otherwise, you will need to replace the lamp. Be sure to use a lamp of the same wattage (too high a wattage can cause overheating). Do not handle the lamp while it is hot. Avoid touching the new lamp with bare fingers; this could shorten its life.<br>4. Switch may be defective. If so, replace it. |
| | Dark edge with light in center of image | The fresnel lens is upside down. Turn it over if you know how; if not, have a qualified specialist do it. |
| | Dark spot on area of screen | The lamp socket within the projector needs adjustment. The task is best done by a trained audiovisual technician. |
| | Dark spot on screen or failure of lens to focus despite all adjustments of focus control | After determining that it is not simply a matter of dirt on the lens or improper use of the focus control, check for a warped fresnel lends. This lens is plastic and can become warped from excessive heat, usually caused by the fan not running properly. Have a qualified specialist repair the fan or thermostat and replace the fresnel lens. |

| EQUIPMENT | PROBLEM | POSSIBLE CORRECTION |
|---|---|---|
| **LCD Panel** | No image on LCD panel | 1. Adjust contrast<br>2. Check computer for instructions on obtaining image |
| | Image appears but is not centered | 1. Check LCD panel instructions<br>2. Adjust centering or frequency |
| | Flickering image or missing lines on LCD panel | 1. Check all connections to be sure they are correct and secure<br>2. Adjust stability or frequency |
| | Intermittent appearance of image | 1. Check all connection to be sure they are correct and secure<br>2. Check equipment setup |
| | Rolling waves in image | 1. Check equipment setup<br>2. Try another overhead projector<br>3. Adjust stability or frequency |
| | Contrast of display panel not uniform | 1. Focus overhead projector<br>2. Adjust contrast<br>3. Use lower-wattage overhead projector |
| | Test pattern only | 1. Check all connections to be sure they are correct and secure<br>2. Refer to instructions to be certain computer is connected properly |

| EQUIPMENT | PROBLEM | POSSIBLE CORRECTION |
|---|---|---|
| **Slide Projector** | Can't find power cord | Look for a built-in storage compartment |
| | No power after plugging in | If you are sure the outlet is live, check the circuit breaker on the slide projector |
| | Fan runs but lamp does not light | Some projectors have separate switches for "Lamp" and "Fan" or a two-stage switch for these two functions. Make sure all switches are properly set. Then check for burned out lamp, If neither of these is the problem, have technician check out the projector. |
| | Image not level | Most slide projectors have an adjustment knob on one of the rear feet. Use the knob to raise or lower the side. |
| | Slide is distorted | The lenses may be out of alignment or broken. Often they can be adjusted easily by aligning them correctly in their slots. |
| | Slide mounts begin to warp | For plastic black-and-white- mounts, check to see that white side of mount is facing the lamp. If the dark side is facing the lamp, a buildup of heat can cause the mount to warp (or even melt). |
| | Slide image upside down or backwards | Remove the slide and reverse it. |
| | Slide jams in gate | 1. Manually remove the slide.<br>2. Jamming can be avoided by not placing bent slides in the tray. Plastic mounts have a tendency to warp; cardboard mounts fray; glass mounts may be too thick for the slide compartment of the tray. For this reason, jamming is more likely to occur with narrow slide compartments. |

# SAMPLE LESSONS

EVOC: Legal Aspects of Ambulance Operation

EMT-BASIC: Initial Assessment

| | |
|---|---|
| **COURSE:** | EMERGENCY VEHICLE OPERATOR COURSE (AMBULANCE): NATIONAL STANDARD CURRICULUM |
| **MODULE A:** | Ambulance Operation: The Basics |
| **LESSON 2:** | **Legal Aspects of Ambulance Operation** |
| **LENGTH:** | 1.5 Hours |
| **COURSE GOAL:** | To provide ambulance operators with the knowledge and skills to operate their vehicles so that their vehicle, equipment, crew, and patients will be delivered safely and efficiently and the safety of the public will be assured during all phases of the delivery of Emergency Medical Services (EMS) involving the ambulance |
| **MODULE GOAL:** | To provide ambulance operators with the knowledge and skills to safely and efficiently operate an ambulance in both nonemergency and emergency modes |
| **LESSON GOAL:** | **To provide participants with knowledge of the federal, state, and local laws and of how to apply the laws when operating an ambulance** |
| **PERFORMANCE OBJECTIVE(S):** | • Identify types of laws that apply to ambulance operation<br>• Identify how specific laws apply to ambulance operation |
| **INSTRUCTIONAL AIDS:** | |

ICON LEGEND
(Those used in this lesson are highlighted)

| | | | | | |
|---|---|---|---|---|---|
| Appendix | Show Overhead | Question and Answer Period | Use Flipchart | Ask Question | Local Requirements |

Types of Regulations 1.

2. Policies Working Together
3. Due Regard for Safety
4. True Emergency Situation
5. Negligence
6. Abandonment
7. Good Samaritan Provision
8. Patient's Rights

| | |
|---|---|
| **INSTRUCTIONAL EQUIPMENT:** | Overhead projector and screen<br>Transparencies<br>Flipchart and markers |
| **APPENDIX:** | Appendix A, Job Aid - Area Motor Vehicle Operation Guidelines |

Training Tips for: Lesson 2: Legal Aspects of Ambulance Operations

Tip 1. Use the forms in Appendix A. Get copies of the state and local statutes, county and city ordinances and regulations. Give each participant a copy.

Tip 2. Develop examples that are appropriate for your organization. Don't leave any doubt as to what is right or wrong. If possible get an attorney or law enforcement official to assist you with preparing the examples for your organization. They could also help in presenting the lesson.

Tip 3. For most organizations, when in doubt call the dispatcher.

Tip 4. It may be possible to get some audio tape from the 911 operations center that would have real examples of ambulance crews asking the dispatcher for advice about a specific incident or reporting their actions.

Instructor Notes | Presentation

## INTRODUCTION

As an ambulance operator, you are responsible for the safe and efficient transportation of your patients and crew. At the same time, you must look out for the safety of the public. The very nature of your job requires you to work with others during a time of crisis and with this comes certain risks. You need to be aware that at all times while performing your job, you are being held "legally accountable" for your actions.

This lesson highlights some of the legal aspects--laws, issues, and guidelines--surrounding the performance of your duties.

## DEFINING THE LAW

Let's first talk about some of the types of regulations covering emergency vehicle operation and how the regulations guide the decisions you make while performing your job.

### Types of Regulations

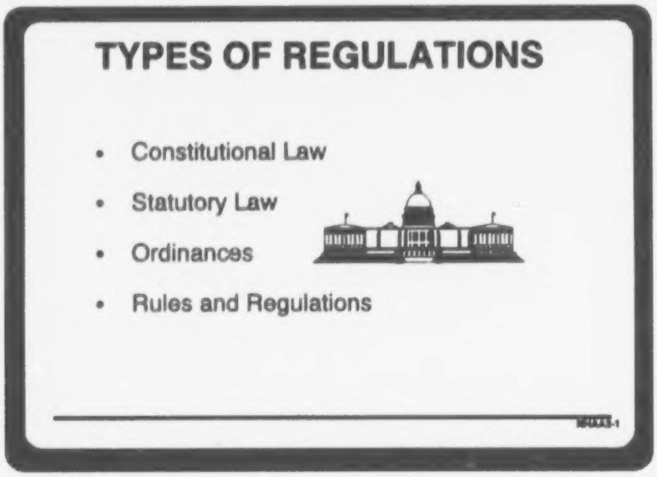
There are several types of regulations that tell us how to conduct emergency vehicle operation. These regulations are for all types of emergency vehicles including ambulances.

737

Instructor Notes

Presentation

**Types of Regulations** 1:



# TYPES OF REGULATIONS

- Constitutional Law
- Statutory Law
- Ordinances
- Rules and Regulations

Constitutional laws come from the U.S. Constitution. The Constitution guarantees the rights of the individual. These laws explain patients' rights before, during, and after transport.

Statutory laws come from legislative acts. Each state has laws or statutes that tell us how to operate emergency vehicles. The laws vary from state to state. For example, the state Motor Vehicle Code for each state tells us laws about traffic regulations. The code may dictate exceptions to these laws for ambulance operators, such as special procedures for proceeding through red traffic lights or parking in a no parking zone.

Ordinances are guidelines enacted by a governing municipal body or its agent. These guidelines usually include city or county codes. For example, in some cities, the use of bright headlights is not permitted.

| Instructor Notes | Presentation |
|---|---|

Rules and regulations are guidelines enacted by an agency that have the force of law. The rules and regulations are intended to provide more information about statutory laws. These are often referred to as the organizational policies and procedures or Standard Operating Procedures (SOP). For example, an organization may have specific guidelines about when to use sirens.

**Understanding the Regulations**

There are things about emergency vehicle operation laws that you need to know. You need to know how the laws work and when you are exempt from doing what the law says to do.

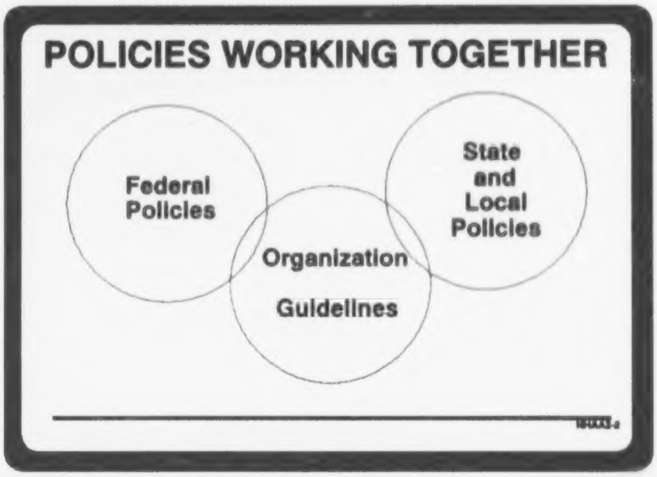
With so many regulations telling us how to operate emergency vehicles, you must know which law applies in a given situation. You may feel like there may be a conflict of policy about how you do your job. Here are some suggested guidelines for EMS ambulance operators:

> All organizational policy should incorporate the principles of state laws, local ordinances, rules, and regulations into guidelines for the ambulance operator.

Instructor Notes

Presentation

**Policies Working Together**



## POLICIES WORKING TOGETHER

This means that all organizational policies and procedures should include and must not contradict federal, state, and local laws concerning the ambulance operation under all conditions. Your organization's policies may be formal or informal, but all policies should be in writing. This can provide protection from liability issues. As an operator, you must know your organization's policies.

Let's see what some of the local policies are concerning ambulance operation. We will discuss what makes up these policies in more detail later in the lesson.

Instructor Notes | Presentation

**local List organization SOPs and other guidelines**

There are times when you will be exempt from certain guidelines listed in the regulations. As part of your job, you are required to make decisions concerning the operation of your vehicle. Good training provides you with the knowledge and ability to make appropriate decisions when faced with an emergency situation. Knowing ahead of time what the law says does not apply in the situation is important. Keep the following three principles in mind when approaching the idea of exemptions:

1. Ambulance operators are subject to all traffic regulations unless a specific exemption is made in the state or local statutes.
2. Exemptions are legal only in the emergency mode.
3. Even with an exemption, operators can be found criminally or civilly liable if involved in a crash.

Some examples of exemptions to laws include proceeding through red lights/stop signs at controlled intersections, parking in a no parking zone, or violating traffic flow and turning procedures.

**Q&A**

What is meant by "specific exemption"?

*[Answer: A specific exemption is a statement which appears in the statutes and specifies an exception to the rule such as: "The operator of an authorized emergency vehicle may park in a no parking zone as long as the operator does not endanger life or property."]*

### Scenario

**Have the participants read the scenario and write their response. Discuss responses as a group.**

Let's apply what we have just learned about the types of laws and exemptions to the laws.

Your state has a specific exemption for emergency vehicles proceeding through an intersection with a red signal light or stop sign. The exemption reads, "Emergency vehicles may proceed through an intersection with a red light signal or stop sign if the vehicle is brought to a complete stop, proper clearance is observed, and the vehicle proceeds through the intersection with caution."

During a run, you are following behind another emergency vehicle responding to an emergency call. You are approaching the intersection when you notice a red light. The other emergency vehicle stops, checks to see the intersection is clear, and then proceeds through the intersection. You then follow right behind the other vehicle through the light. Was your action within the law? Why?

| Instructor Notes | Presentation |
|---|---|
| | *[Answer: No. Even though the first vehicle did meet the requirements of the law, your vehicle must also come to a complete stop, check for proper clearance, and then proceed with caution. No two emergency vehicles may proceed through the intersection at one time.]* |

# Appendix I
# Test/Answer Key

## MODULE A TEST
### Ambulance Operation: The Basics

DIRECTIONS: Read each test item. Select the response which best answers the question or completes the statement.

1. Driving to an emergency scene, the ambulance operator approaches a controlled intersection with a red light. The operator stops at the red light, checks for clearance, and then proceeds through the light with caution. Which law is the operator complying with?

    A. True Emergency
    B. Negligence
    C. Abandonment
    D. Due Regard for Safety

2. An ambulance operator just arrived at the scene of a medical emergency. Which of the following describes the appropriate communication action the operator should take?

    A. No radio report required
    B. Dispatch, Unit 42; we've arrived at the scene
    C. Dispatch, 42; our 10-20 is the accident scene
    D. Harry, you there? This is Bob; uh! we're here; we'll call when we leave

3. What would be the effect of putting too many people into the ambulance?

    A. If maximum payload is exceeded, the operator will have to prepare a written report on the circumstances
    B. Would increase momentum which would make stopping vehicle more difficult
    C. Would have no effect as long as the EMT has sufficient room to continue basic life support on the patient
    D. Would have no effect because ambulance engine has sufficient horsepower

4. Which inspections and maintenance is the Ambulance Operator responsible for performing?

   A. Operator not responsible for inspecting or maintaining vehicle
   B. Full check and preventive maintenance
   C. Quick check, full check, and maintenance for which the operator has been trained and authorized to perform
   D. Quick check and that maintenance which is required during a run

5. A multi-car crash has been reported. The primary consideration in selecting a route to the scene is--

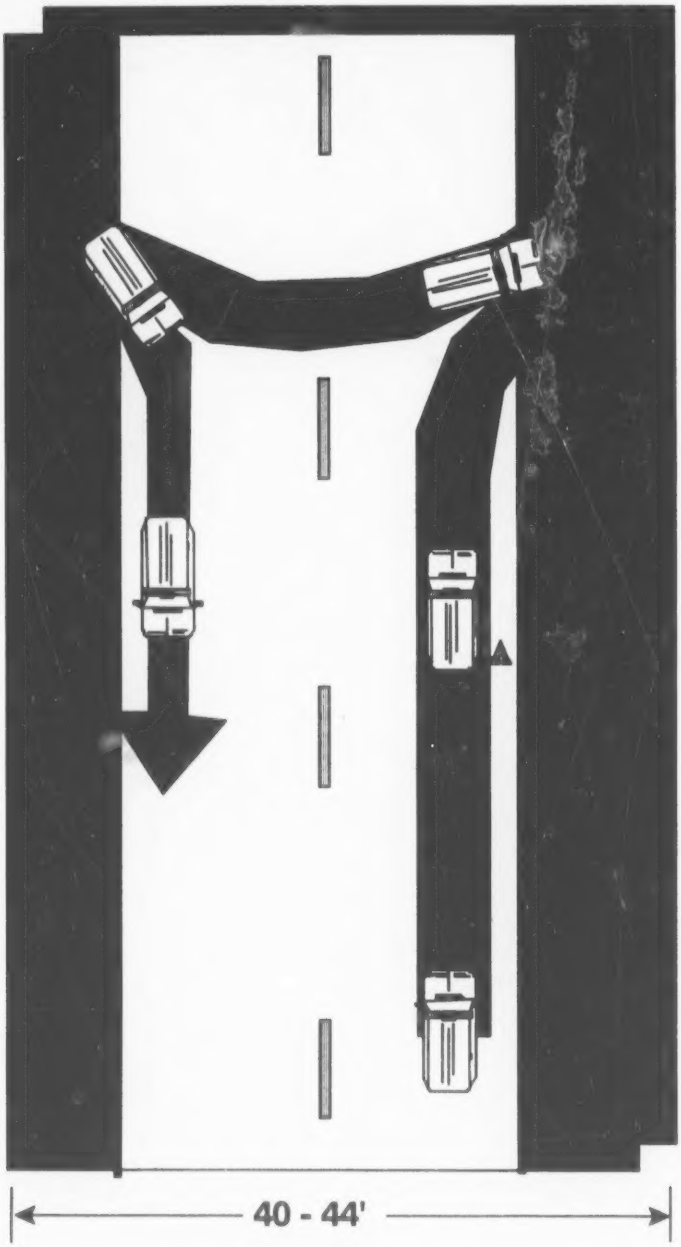
   A. speed
   B. safety
   C. directions given by reporting party
   D. destination medical facility

6. When driving defensively and following the 2-4-12 rule, the operator will--

   A. be confident that all other drivers see the light and hear the siren and grant the operator the right of way
   B. maintain safety cushion around ambulance and drive 12 seconds ahead of the vehicle
   C. maintain 12 second spacing behind vehicle in front
   D. maintain two car lengths between the ambulance and the car ahead when in the city and four car lengths when on a interstate highway

746

# Three-Point Turn



## Three-Point Turn

### Purpose:

To develop the coordination of acceleration, turning, judgment of road width, and signaling.

### Procedure:

Check traffic. When clear, brake and turn to come to stop with front wheels on right shoulder. Begin backing and turning steering wheel to left. Stop when rear wheels are on left shoulder. Steer to the right and begin to accelerate. Move into right lane and continue forward.

### Instructor:

1. Explains purpose of exercise and key factors of the exercise.
2. Demonstrates exercise at moderate speed.
3. Demonstrates exercise at required speed.

### Participant:

1. Assumes proper driving position; seat, mirrors, seat belt.
2. Enters course at speed determined by instructor.
3. Checks rear traffic and signals for a stop at least 100 feet in advance.
4. Brings vehicle to a stop at approximately a 15-degree angle from the center of the road.
5. Begins backing turning the wheel slowly for the first 5 feet.
6. Steers counter clockwise until rear wheels barely hit the shoulder.
7. Moves forward into the right lane.
8. Negotiates the course smoothly.
9. Keeps steering movements constant and even.
10. Maintains 9 - 3 hand position.
11. Exits the course at the direction of the instructor.

# Three-Point Turn Exercise Rating

Participant's name Date Vehicle make/number

Practice Exercises

| | | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| A. | Entered course correctly................ | ☐ | ☐ | ☐ | ☐ |
| B. | Maintained required speed.............. | ☐ | ☐ | ☐ | ☐ |
| C. | 9 - 3 hand position (going forward). | ☐ | ☐ | ☐ | ☐ |
| D. | Controlled acceleration.................. | ☐ | ☐ | ☐ | ☐ |
| E. | Steering control........................... | ☐ | ☐ | ☐ | ☐ |
| F. | Accelerator, steering coordination.... | ☐ | ☐ | ☐ | ☐ |
| G. | Smooth acceleration..................... | ☐ | ☐ | ☐ | ☐ |
| H. | Foot movement.......................... | ☐ | ☐ | ☐ | ☐ |
| I . | Use of brakes............................ | ☐ | ☐ | ☐ | ☐ |
| J . | Signaled intention....................... | ☐ | ☐ | ☐ | ☐ |
| K. | Checked mirror.......................... | ☐ | ☐ | ☐ | ☐ |
| L. | Turned head.............................. | ☐ | ☐ | ☐ | ☐ |

Number of cones hit_____ _____ _____ _____

Reaction time was adequate. YES NO

Vehicle remained under control at all time. YES NO

Describe negative actions or attitudes.

Failed to complete exercise because

All requirements were met. YES NO

GENERAL REMARKS:

Instructor's signature_______________________________Date_______________

I have seen the completed form and have been given an explanation of my performance and rating.

Participant's signature_______________________________Date_______________

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-2.1 Summarize the reasons for forming a general impression of the patient.(C-1)
3-2.2 Discuss methods of assessing altered mental status.(C-1)
3-2.3 Differentiate between assessing the altered mental status in the adult, child and infant patient.(C-3)
3-2.4 Discuss methods of assessing the airway in the adult, child and infant patient.(C-1)
3-2.5 State reasons for management of the cervical spine once the patient has been determined to be a trauma patient.(C-1)
3-2.6 Describe methods used for assessing if a patient is breathing.(C-1)
3-2.7 State what care should be provided to the adult, child and infant patient with adequate breathing.(C-1)
3-2.8 State what care should be provided to the adult, child and infant patient without adequate breathing.(C-1)
3-2.9 Differentiate between a patient with adequate and inadequate breathing.(C-3)
3-2.10 Distinguish between methods of assessing breathing in the adult, child and infant patient.(C-3)
3-2.11 Compare the methods of providing airway care to the adult, child and infant patient.(C-3)
3-2.12 Describe the methods used to obtain a pulse.(C-1)
3-2.13 Differentiate between obtaining a pulse in an adult, child and infant patient.(C-3)
3-2.14 Discuss the need for assessing the patient for external bleeding.(C-1)
3-2.15 Describe normal and abnormal findings when assessing skin color.(C-1)
3-2.16 Describe normal and abnormal findings when assessing skin temperature.(C-1)
3-2.17 Describe normal and abnormal findings when assessing skin condition.(C-1)

3-2.18 Describe normal and abnormal findings when assessing skin capillary refill in the infant and child patient.(C-1)
3-2.19 Explain the reason for prioritizing a patient for care and transport.(C-1)

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:
3-2.20 Explain the importance of forming a general impression of the patient.(A-1)
3-2.21 Explain the value of performing an initial assessment.(A-2)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:
3-2.22 Demonstrate the techniques for assessing mental status.(P-1,2)
3-2.23 Demonstrate the techniques for assessing the airway.(P-1,2)
3-2.24 Demonstrate the techniques for assessing if the patient is breathing.(P-1,2)
3-2.25 Demonstrate the techniques for assessing if the patient has a pulse.(P-1,2)
3-2.26 Demonstrate the techniques for assessing the patient for external bleeding.(P-1,2)
3-2.27 Demonstrate the techniques for assessing the patient's skin color, temperature, condition and capillary refill (infants and children only).(P-1,2)
3-2.28 Demonstrate the ability to prioritize patients.(P-1,2)

## PREPARATION

Motivation: The EMT-Basic will encounter patients who require emergency medical care. It is important for the EMT-Basic to identify those patients who require rapid assessment critical interventions, and immediate transport.

Following the initial assessment, the EMT-B will use information obtained during this phase with the appropriate history and physical examination.

Prerequisites: BLS, Preparatory, and Airway.

## MATERIALS

AV Equipment: Utilize various audio-visual materials relating to patient assessment. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met.

EMS Equipment: Exam gloves, airway management equipment.

## PERSONNEL

Primary Instructor: One EMT-Basic instructor knowledgeable in patient assessment.

Assistant Instructor: The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable about patient assessment.

Recommended Minimum Time to Complete: One hour

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## PRESENTATION

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### Declarative (What)

I. General Impression of the Patient
  A. Definition
    1. The general impression is formed to determine priority of care and is based on the EMT-Basic's immediate assessment of the environment and the patient's chief complaint.
    2. Determine if ill, i.e., medical or injured (trauma). If injured, identify mechanism of injury.
    3. Age
    4. Sex
    5. Race
  B. Assess patient and determine if the patient has a life threatening condition.
    1. If a life threatening condition is found, treat immediately.
    2. Assess nature of illness or mechanism of injury.

II. Assess Patient's Mental Status. Maintain Spinal Immobilization if Needed.
  A. Begin by speaking to the patient. State name, tell the patient that you are an emergency medical technician, and explain that you are here to help.
  B. Levels of mental status
    1. Alert
    2. Responds to Verbal stimuli.
    3. Responds to Painful stimuli.
    4. Unresponsive - no gag or cough

- III. Assess the Patient's Airway Status.
  - A. Responsive patient - Is the patient talking or crying?
    - 1. If yes, assess for adequacy of breathing.
    - 2. If no, open airway.
  - B. Unresponsive patient - Is the airway open?
    - 1. Open the airway. Positioning is patient, age, and size specific.
      - a. For medical patients, perform the head-tilt chin-lift.
        - (1) Clear
        - (2) Not clear - Clear the airway.
      - b. For trauma patients or those with unknown nature of illness, the cervical spine should be stabilized/immobilized and the jaw thrust maneuver performed.
        - (1) Clear
        - (2) Not clear - Clear the airway.
- IV. Assess the Patient's Breathing.
  - A. If breathing is adequate and the patient is responsive, oxygen may be indicated.
  - B. All responsive patients breathing <24 breaths per minute or <8 breaths per minute should receive high flow oxygen (defined as a 15 LPM nonrebreather mask).
  - C. If the patient is unresponsive and the breathing is adequate, open and maintain the airway and provide high concentration oxygen.
  - D. If the breathing is inadequate, open and maintain the airway, assist the patient's breathing and utilize ventilatory adjuncts. In all cases oxygen should be used.

- E. If the patient is not breathing, open and maintain the airway and ventilate using ventilatory adjuncts. In all cases oxygen should be used.

- V. Assess the Patient's Circulation.
  - A. Assess the patient's pulse.
    - 1. The circulation is assessed by feeling for a radial pulse.
      - a. In a patient one year old or less, palpate a brachial pulse.
      - b. If no radial pulse is felt, palpate carotid pulse.
        - (1) If pulseless, medical patient >12 years old, start CPR and apply automated external defibrillator (AED).
        - (2) Medical patient < 12 years old, start CPR.
        - (3) Trauma patient, start CPR.
  - B. Assess if major bleeding is present. If bleeding is present, control bleeding.
  - C. Assess the patient's perfusion by evaluating skin color and temperature.
    - 1. The patient's skin color is assessed by looking at the nail beds, lips and eyes.
      - a. Normal - pink
      - b. Abnormal conditions
        - (1) Pale
        - (2) Cyanotic or blue-gray
        - (3) Flushed or red
        - (4) Jaundice or yellow
    - 2. Assess the patient's skin temperature by feeling the skin.
      - a. Normal - warm
      - b. Abnormal skin temperatures
        - (1) Hot
        - (2) Cool
        - (3) Cold
        - (4) Clammy - cool & moist
    - 3. Assess the patient's skin condition. This is an assessment of the amount of moisture on the skin.
      - a. Normal - dry
      - b. Abnormal - moist or wet
    - 4. Assess capillary refill in infant and child patients.
      - a. Normal capillary refill is less than two seconds.
      - b. Abnormal capillary refill is greater than two seconds.

- VI. Identify Priority Patients.
  - A. Consider:
    - 1. Poor general impression
    - 2. Unresponsive patients - no gag or cough
    - 3. Responsive, not following commands
    - 4. Difficulty breathing

    5. Shock (hypoperfusion)
    6. Complicated childbirth
    7. Chest pain with BP <100 systolic
    8. Uncontrolled bleeding
    9. Severe pain anywhere
  B. Expedite transport of the patient. Consider ALS back up.

VII. Proceed to the appropriate focused history and physical examination.

## APPLICATION

### Procedural (How)

1. Review airway patency, breathing and oxygen delivery.
2. Review methods of assessing mental status.
3. Demonstrate obtaining radial, carotid, and brachial pulses.
4. Show assessment and control of major external bleeding.
5. Demonstrate assessment of skin color, temperature and capillary refill.

### Contextual (When, Where, Why)

Perform initial assessment on all patients after assuring scene and personal safety. If the scene is safe and the environment permits, perform the assessment prior to moving the patient. The initial assessment is a rapid means of assessing patient condition and priorities of care.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Students should hear recordings of various patient situations to listen for clues concerning the general impression.
2. Students should hear normal and abnormal airway noises.
3. Students should hear breathing.

### Visual (See)

1. Students should see audio-visual aids or materials of various patients situations.
2. Students should see breathing while an initial assessment is being performed.
3. Students should see appropriate landmarks for assessing pulses.
4. Students should see examples of major bleeding.
5. Students should see normal skin color and condition.
6. Students should see how to control major bleeding.
7. Students should see the flow chart from Appendix I.

### Kinesthetic (Do)

1. Students should practice establishing mental status on programmed patients (fellow students) with various altered mental statuses.
2. Students should practice airway opening techniques on manikins and each other.
3. Students should practice assessing breathing.
4. Students should practice assessing pulses.
5. Students should practice assessing for major bleeding.
6. Students should practice assessing skin color, temperature and condition.
7. Students should practice assessing capillary refill.
8. Students should practice recording assessment findings.
9. Students should use the flow chart from Appendix I.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# APPENDIX G

The following remediation sheet should be completed after every class for individual students or groups of students having difficulty with knowledge, skills, and/or attitude. The primary instructor or an assistant instructor should work with the individual or group as soon as possible to assure that they achieve success in the program.

# EMT-Basic National Standard Curriculum
## Remediation Sheet

| | |
|---|---|
| **Date:** | **Student:** |
| **Area of Difficulty:** | |
| | |
| | |
| | |
| **Action Plan:** | |
| **Completed:** | |

| | |
|---|---|
| **Date:** | **Student:** |
| **Area of Difficulty:** | |
| | |
| | |
| | |
| **Action Plan:** | |
| **Completed:** | |

| | |
|---|---|
| **Date:** | **Student:** |
| **Area of Difficulty:** | |
| | |
| | |
| | |
| **Action Plan:** | |
| **Completed:** | |

## APPENDIX F

The following enrichment lesson sheets should be copied and used as needed to assist with augmenting the core curriculum.

These sheets are designed to be used as a template to assure that added materials may be presented in similar format and style to the other lessons. These sheets may be added to any of the lessons in the core curriculum.

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-B student will be able to:

-
-
-

### AFFECTIVE OBJECTIVES

-
-
-

### PSYCHOMOTOR OBJECTIVES

-
-
-

## PREPARATION

Motivation:

Prerequisites:

### MATERIALS

AV Equipment:

Utilize various audio-visual materials relating to the ____________________. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meets the needs of the program. Materials should be edited to assure the objectives of the curriculum are met.

EMS Equipment:

### PERSONNEL

Primary Instructor:

Assistant Instructor:

Recommended Minimum

Time to complete:

## PRESENTATION

Declarative (What)
(Usually in outline form)

## APPLICATION

### Procedural (How)

1.

2.

3.

### Contextual (When, Where, Why)

1.

2.

3.

## STUDENT ACTIVITIES

### Auditory (Hear)

1.

2.

3.

Visual (See)

1.

2.

3.

Kinesthetic (Do)

1.

2.

3.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments e.g. quiz, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-B students during the role play, practice or other skill stations, to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students that are having difficulty with this subject content. Complete remediation sheet from the instructor's guide.

# STUDENT PRESENTATION EVALUATION FORM

Presenter: ____________________

Subject: ______________________________

| Strongly Agree | Agree | Disagree | Strongly Disagree | |
|---|---|---|---|---|
| | | | | 1. Lesson objectives were made clear to students |
| | | | | 2. Lesson introduction created interest and established the need to know |
| | | | | 3. All needed supplementary teaching/learning items were ready and organized |
| | | | | 4. Instructor maintained proper position for all students to see presentation |
| | | | | 5. Aids were well-planned, well-developed, and used appropriately |
| | | | | 6. Vocabulary was at appropriate level |
| | | | | 7. The instructor regularly checked with students to see if they were on target |
| | | | | 8. Information was presented in an organized format |
| | | | | 9. Skill demonstration was presented in a logical step-by-step sequence |
| | | | | 10. Appropriate teaching method(s) was (were) selected |
| | | | | 11. The instructor's delivery was poised, effective and geared to the topic |
| | | | | 12. Instructor stayed on the subject |
| | | | | 13. Summation and closure were effective |

14. Lesson was too long ( )
too short ( ) for content

15. What were this instructor's strengths?

16. Where might this instructor improve?

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## EMS Instructor Training Program—End of Lesson Evaluation

Name of lesson: ______________________________

1. Please rate the following by checking the appropriate box.

| | EXCELLENT | GOOD | AVERAGE | POOR | VERY POOR |
|---|---|---|---|---|---|
| Objectives matched content | | | | | |
| Depth of information | | | | | |
| Sequence of content | | | | | |
| Opportunities for discussion | | | | | |
| Relevance of activities | | | | | |
| Clarity of graphics/visual aids | | | | | |
| Format of Student Guide | | | | | |
| | EXCELLENT | SUFFICIENT | INSUFFICIENT | | |
| Instructor guidance | | | | | |
| Amount of practice | | | | | |
| Number of activities | | | | | |
| | JUST RIGHT | TOO SLOW/LONG | TOO FAST/SHORT | | |
| Pace of training | | | | | |
| Length of the lesson | | | | | |

2. If you answered poor, very poor, or insufficient to any of the above, please explain why.

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3. On the back of this sheet, please feel free to write any other comments you have regarding this lesson.

## COURSE EVALUATION

PURPOSE: It is our objective to present a useful and effective training course. You are the final authority on whether that objective has been met. Your completion of this form, therefore, will play an important part in our future planning. Please do not feel bound to limit your remarks to questions on this form. Your comments on any aspect of the course will be appreciated.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Course** | **INSTRUCTOR TRAINING COURSE** | **Dates** | | | | |
| **RESPONSES (Check the response closest to your opinion)** | | Strongly Agree | Agree | Disagree | Strongly Disagree | Not Applicable |
| 1. Course material was | a. Well organized | | | | | |
| | b. Complete and appropriate | | | | | |
| | c. Readable (printed well) | | | | | |
| 2. Audio visual materials were: | a. Related to the course | | | | | |
| | b. Good quality | | | | | |
| | c. Sufficient in number | | | | | |
| 3. Course | a. Was a reasonable length | | | | | |
| | b. Was worth recommending to others | | | | | |
| | c. Contributed to my knowledge and skills | | | | | |
| | d. Accomplished announced purpose | | | | | |
| 4. Instruction | a. Subject was thoroughly covered | | | | | |
| | b. Course objectives were clear | | | | | |
| | c. Exercises were appropriate | | | | | |
| | d. Time in class was spent effectively | | | | | |
| | e. Participation was encouraged | | | | | |
| 5. Classroom | a. Was comfortable | | | | | |
| | b. Included a manageable number of students | | | | | |
| | c. Was appropriate for this course | | | | | |
| 6. Instructor | a. Was prepared for class | | | | | |
| | b. Stimulated my interest in subject area | | | | | |
| | c. Made course a worthwhile learning experience | | | | | |

Remarks

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## COURSE EVALUATION (Continued)

7. Overall instructor evaluation (Check your opinion)

|  |  |  |  |  |
|---|---|---|---|---|
| a. Knowledge of the subject | ☐ excellent | ☐ good | ☐ fair | ☐ poor |
| b. Ability to teach | ☐ excellent | ☐ good | ☐ fair | ☐ poor |

8. Would you add or emphasize any subject matter areas in subsequent course sessions?

☐ No ☐ Yes, list these areas and give your reasons.

9. Would you delete or de-emphasize any subject-matter areas?

☐ No ☐ Yes, list these areas and give your reasons.

10. Other comments. Please provide any comments, either general or specific, that you would like to make relative to this course.

| Signature and Title | Organization | Date |
|---|---|---|
|  |  |  |

# APPENDIX C

## INFORMATION RESOURCES

National Registry of EMTs
6610 Busch Blvd.
P.O. Box 29233
Columbus, OH 43229

National Association of Emergency Medical Technicians (NAEMTs)
102 W. Leake Streeet
Clinton, MS 39056
800/34-NAEMT

National Association of State EMS Directors (NASEMSD)
1947 Camino Vida Roble, Suite 202
Carlsbad, CA 92008

National Highway Traffic Safety Administration (NHTSA)
400 7th Street, S.W
Washington, D.C. 20590

Association for Education Communications and Technology (AECT)
1025 Vermont Avenue, N.W.
Washington, D.C.
202-347-7834

Association for Supervision and Curriculum (ASCD)
1250 N. Pitt St.
Alexandria, VA
(703) 547-9110

Education Resource Information Clearinghouse (ERIC)
7420 Fullerton Rd., Suite 110
Springfield, VA
1-800-443-ERIC

## EMS PUBLICATION ORDERING INFORMATION

To order DOT EMS publications, please call (202) 512-2250. Other available publications are:

- First Responder: National Standard Curriculum
- Ambulance Operator's Course: National Standard Curriculum, Instructor Guide
- Ambulance Operator's Course: National Standard Curriculum, Participant Guide
- EMT, Basic: National Standard Curriculum
- EMT, Intermediate: National Standard Curriculum, Course Guide
- EMT, Intermediate: National Standard Curriculum, Instructor's Lessons Plans
- EMT, Paramedic: National Standard Curriculum, Course Guide
- EMT, Paramedic: National Standard Curriculum, Instructor's Lessons Plans
- Emergency Medical Care: A Manual for the Paramedic in the Field
- Emergency Medical Care: A Manual for the Paramedic in the Field (Workbook)

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772

# EMS Instructor Training Program

## National Standard Curriculum
## Student Guide

U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

NHTSA
**People Saving People**

773

# PRINT APPROVAL ABSTRACT

## *Emergency Medical Services Instructor Training Program:*

## *National Standard Curriculum*

NHTSA has assumed the responsibility for the development of training courses. In order for DOT curricula to meet the needs of the constituency it must serve, curricula must be accurate and current. Recognizing the lack of standardization and the limited background of EMS instructors, NHTSA produced in 1986 the first edition of its *Emergency Medical Service Instructor Training Program.* NHTSA has now completed a revision of the 1986 curriculum. The new curriculum focuses on strategies for teaching assessment based curricula and ensures that modern curriculum development and adult education principles are utilized.

We welcome your comments and suggestions. Please direct them to:

National Highway Traffic Safety Administration
(NTS-42)
400 7th Street, S.W.
Washington, D.C. 20590

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770

# FOREWORD

The National Highway Traffic Safety Administration (NHTSA) has played a critical role in the establishment of national standards for improving the management and delivery of Emergency Medical Services (EMS) in the United States. Thanks to NHTSA's leadership, significant improvements in EMS legislation, funding, and State and local management have been made. One of NHTSA's most important contributions has been the establishment of national standards for training.

In this capacity, NHTSA assumes responsibility for both developing and revising training programs to insure they are responsive to the standards established by the Highway Safety Act of 1966 (amended). NHTSA also intends that these courses be of the highest quality, be based upon the most up-to-date technical information, and include proven, yet innovative, instructional strategies.

To this end, NHTSA supported the revision of the 1986 Instructor Training Program. In States where instructor certification is required, NHTSA is hopeful that this course will meet and exceed certification requirements.

The success of any course depends substantially on the caliber of the instructors delivering the training. This underlines the critical role the Instructor Training Program plays in the overall curriculum.

NHTSA wishes to thank Analysis & Technology, Inc. (A&T) for their coordination of this project.

NHTSA also acknowledges each individual in the Curriculum Development Group (CDG) for their invaluable assistance in the development and review of these materials. As representatives of prominent EMS organizations, the significance of the input from the following CDG participants cannot be underestimated:

Dr. Thomas Blackwell, National Association of EMS Physicians
Mr. Phil Dickison, National Registry of EMTs
Ms. Gail Dubs, National Council of State EMS Training Coordinators
Ms. Deborah Henderson, National EMSC Resource Alliance
Mr. Patrick Moore, National Association of Emergency Medical Technicians
Ms. Ruth Oates-Graham, National Association of State EMS Directors

# TABLE OF CONTENTS

| Topic | Page |
|---|---|
| Course Goals | 1 |
| Course Topics | 2 |
| Overview of Course Activities | 4 |
| References | 6 |
| Student Evaluation | 6 |
| Introduction | 1-1 |
| Instructor Roles and Responsibilities | 2-1 |
| Legal Implications | 3-1 |
| The Adult Learner | 4-1 |
| Creating an Effective Educational Environment | 5-1 |
| Objectives | 6-1 |
| Evaluation | 7-1 |
| Instructional Strategies and Methods | 8-1 |
| Design and Use of Media | 9-1 |
| Lesson Plan Development | 10-1 |
| Final Presentations | |

# APPENDICES

| | | |
|---|---|---|
| Activity Materials | Appendix A | A-1 |
| References | Appendix B | B-1 |
| Information Resources | Appendix C | C-1 |
| DOT/NHTSA Curricula | Appendix D | D-1 |

This publication is distributed by the U.S. Department of Transportation (DOT), National Highway Traffic Safety Administration (NHTSA), in the interest of information exchange. The opinions, findings, and conclusions expressed in this publication are those of the author(s) and not necessarily those of NHTSA/DOT. The United States Government assumes no liability for its contents or use thereof. If trade or manufacturer's names or products are mentioned, it is only because they are considered essential to the objectives of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

780

## Introduction

The *EMS Instructor Training Program: National Standard Curriculum* focuses on those skills necessary to successfully present any of the DOT NHTSA EMS courses. The course provides a solid foundation in learning theory, yet moves directly into hands-on application. With the emphasis on practical skill development, Instructor Trainees will complete the course with the confidence that they can successfully teach any course in the National Standard Curricula for which they are technically qualified.

The course is designed as a series of interactive lessons facilitated by an Instructor Trainer. Included throughout the course are group discussions, individual exercises, and scenario-based roleplays that allow participants to apply their developing instructor skills. The Instructor Guide contains the information needed to teach the course and the Course Guide contains information and materials necessary for course administration. The Student Guide completes the curriculum package.

## Course Goals

At the completion of this course, the participants will be able to:

- Organize and prepare curriculum materials for presentation
- Effectively deliver each lesson contained in the curriculum, as measured by overall student performance on training objectives
- Prepare instructional aids which will increase the effectiveness of the training
- Ensure that all necessary equipment and materials necessary for student learning are present and operational
- Evaluate student performance and provide corrective feedback to improve subsequent performance
- Provide a mechanism for evaluating the training program's effectiveness
- Obtain the appropriate curriculum package developed by NHTSA

Specific objectives for each lesson in the Instructor Training course are listed in the Overview section at the beginning of each lesson.

# STUDENT GUIDE

## Course Topics

1. **Introduction**

   - Introductory Remarks
   - Lesson Objectives
   - Course Schedule
   - Administrative Details
   - Course Objectives
   - Course Expectations

2. **Instructor Roles and Responsibilities**

   - Introduction to Various Roles
   - Problem Students and Challenging Situations
   - Positive, Constructive, and Corrective Feedback
   - Team Teaching Guidelines
   - Instructor Attributes

3. **Legal Issues**

   - Harassment
   - Discrimination
   - Americans with Disabilities Act of 1992 (ADA)
   - Confidentiality
   - Negligence
   - Occupational Health and Safety Act (OSHA)

4. **The Adult Learner**

   - Learning Theory
   - Characteristics of Adult Learners
   - Learning Styles
   - Skills for Success

5. **Creating an Effective Learning Environment**

   - Assess Your Audience
   - Assess the Physical Environment
   - Room Setup
   - Classroom Management

## 6. Objectives

- Overview of Training Design and Development
- Preparing to Teach Existing Curriculum
- Learning Objectives
- Learning Domains
- Writing Useful Objectives
- Getting Started—Determine Your Lesson Objectives

## 7. Evaluation

- Purposes of Evaluation
- Evaluation Instrument Development Principles
- Cognitive Test Item Development
- Affective and Psychomotor Test Item Development
- Getting Started—Create Your Evaluation Instrument(s)

## 8. Instructional Strategies and Methods

- Parts of Instruction
- Teaching Methods
- Getting Started—Decide on Your Methods
- Communication and Presentation Skills
- Questioning Techniques

## 9. Media

- Media Selection
- Instructional Value of Media
- Principles of Design
- Teaching Aids—Prepared and Spontaneous
- Getting Started—Create Your Own Teaching Aid(s)

## 10. Lesson Plan Development

- Overview
- Components
- Examples of Lesson Plans
- Getting Started—Develop Your Lesson Plan

783

**Putting It All Together—Final Presentations**

- Final Presentations
- Peer/Instructor Feedback and Evaluation of Presentations
- Review of Course Objectives
- Course Evaluation

## Overview of Course Activities

- **"Getting Started" and "Putting It All Together"**

The overall strategy for this course is hands-on practice in preparing and presenting instructional materials. Thus, an evolving activity has been designed which culminates in the Final Presentations. Components of this evolving activity have been included in Lessons 6—10. Each component deals with an essential element of training delivery and is listed here:

- Getting Started—Determine Your Lesson Objectives
- Getting Started—Create Your Evaluation Instrument(s)
- Getting Started—Decide on Your Methods
- Getting Started—Design Your Own Teaching Aid(s)
- Getting Started—Develop Your Lesson Plan

Each "Getting Started" exercise has been designed to prepare Instructor Trainees to teach. As the final test of these newly acquired skills, students will deliver a half-hour lesson segment. These presentations are vital to the Instructor Training Course strategy and represent a substantial portion of overall course time.

- **Additional Activities and Exercises**

In addition to the "Getting Started" activities, which are specifically designed to prepare students for the Final Presentations, exercises have been included whenever possible to help students apply what they have learned, to illustrate the material presented, and to promote an interactive learning environment.

Many activities are designed to give new instructors a chance to practice various aspects of instruction and public speaking. For example, the "reporter" for a small group must organize material and present it to the class. The "observer" of a skill demonstration must rate performance. Be aware that this practice is necessary to develop competence and assign the role to the more reticent students rather than letting the stronger members take over.

## References (Appendix B)

Many references have been developed specifically for use during this course and, even more importantly, for use as Instructor Trainees begin to teach. They can be found in Appendix B, References, in both the Student and Instructor Guides. Please review these materials and use them whenever applicable throughout the course, such as during roleplays and for completing activities.

## Student Evaluation

The EMS Instructor Training Course includes several means for assessing student achievement of objectives. The primary source for evaluation is the student's performance in developing and presenting a lesson plan, and a comprehensive presentation evaluation form has been provided in Appendix B for that purpose.

- **Informal Evaluation Opportunities**

  However, the quality of student participation in instructional activities, question and answer sessions, and class discussions should also be noted as part of the assessment process. Therefore, the instructor is encouraged to take advantage of informal evaluation opportunities throughout the course.

- **Additional Written Tests**

  Additional written tests may be developed by the Instructor Trainer to evaluate end-of-lesson or end-of-course objectives as deemed necessary. Each student must demonstrate attainment of knowledge and skills in each area taught in the course. It is the responsibility of the Instructor Trainer to assure that students attain proficiency in each topic area before they proceed to the next area.

- **Requirements for Course Completion**

  Student requirements for completing the course are as follows:

  - Skills. Students must demonstrate skill proficiency as described in the lesson objectives
  - Knowledge. Students must demonstrate content knowledge comprehension as described in the lesson objectives

- Attitude. Students must demonstrate conscientiousness, interest, and enthusiasm in the course
- Attendance. Students should be required to attend all lessons. The Instructor Trainer should establish an attendance policy prior to course delivery and should communicate that policy to students during the first session. Attendance is required at all tests and evaluation sessions. At the discretion of the Instructor Trainer, special examination sessions may be provided for students who miss tests for valid reasons.

If, after counseling and remediation, a student fails to demonstrate competence in specific knowledge and skills, or to demonstrate an appropriate attitude, the student should not be permitted to pass the course. The level of knowledge and skills attained by a student in the classroom will be reflected in his or her performance on the job.

## ■ Evaluation of Post-Instruction Performance

Since the primary objective of the course is to develop the student's ability to teach EMS courses, the ultimate indication of program effectiveness is how well the student subsequently performs as a course instructor. Each state should develop a comprehensive program for evaluating competency.

If at all possible, the Instructor Trainer should plan to evaluate each student's performance as an instructor of a DOT/NHTSA EMS curriculum package. This can be accomplished in one of several ways, depending upon state or local practice. The Instructor Trainer could sit in as a reviewer on the first course for each new instructor. Or, s/he could volunteer to assist during initial training experiences. New instructors could be required to do some student teaching prior to being a lead instructor. An option at the local level is to confer certification after the instructor candidate successfully presents their first course.

## ■ State-Specific Requirements

Additional qualifications may be imposed by the State or area in which the curriculum is given. In the event that the curriculum is offered by a college or university and credits are given for successful completion, additional restrictions may apply. The Course Administrator should contact the State EMS office prior to conducting the Instructor Training Program to be certain that all requirements are met.

# INTRODUCTION

## 1

Introductory Remarks ◄
Lesson Objectives ◄
Course Materials ◄
Administrative Details ◄
Course Objectives ◄
Course Expectations ◄

## OVERVIEW

**Suggested instructional time for this lesson:** 1/2 hour

### Introduction

This lesson opens the Instructor Training Program with welcoming remarks from the instructor(s) and/or course administrator, as well as student introductions. Depending upon local practice, a class roster may be circulated and initialed for registration purposes.

This lesson is intended as a learning experience for the Instructor Trainees. It provides a model for an appropriate way to open a course. The instructor will lead a guided discussion regarding the significance of each component of the introductory lesson.

### Lesson Objectives

Through group discussion and question and answer sessions, the EMS instructor trainee will be able to:

- State the purpose and goals of the Instructor Training Program
- List the elements of an appropriate course introduction
- Explain the purpose and desired result of each element of the introduction

### Lesson Materials

- Overhead projector and screen
- Flipchart and markers

### Instructional Strategies

- Lecture
- Discussion
- Question and answer

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | **I. Introductory Remarks**<br>A. Registration<br>B. Welcoming remarks |

789

*ADDITIONAL INFORMATION*

## I. Introductory Remarks

### A. Registration

It is important that a member of the teaching staff greet students as they arrive. The teaching staff should determine in advance who will open the first session, the staff members who plan to attend, and what each person's responsibilities will be. As students arrive, say something like this, "Good morning, and welcome to the National Standard Curriculum: Instructor Training Program. My name is ______________________.

Whether the course administrator, the lead instructor, or the educational facility handles registration, it is important for the instructor to keep accurate attendance records. Obtain a list of those enrolled prior to the first class, and use it as a sign-in sheet. The premise here is that formal registration will have occurred prior to start time for the first session, and that the instructor is simply confirming attendance. Ask students to verify spelling and write their initials next to their name.

### B. Welcoming remarks

As you circulate the class roster, you can begin the class. Start by giving the students a framework from which to view the coming program. In instructional jargon, that's known as an "advanced organizer." It helps students mentally prepare for what is ahead. Let them know the purpose of the course and something about how those goals will be accomplished.

For this course, the advanced organizer might sound something like this:

The purpose of the Instructor Training Program is to equip you, the Instructor Trainee, with the skills and tools you will need to conduct training effectively. You will be encouraged to participate in discussions and exercises that are designed to develop those skills. We will discuss the unique characteristics of adult students, and the theory that underlies a comprehensive instructional program. You will apply this theory as you walk through each step in the design, development, and delivery process, creating your own lesson plan as you go. By the end of our 40-hour course, you will actually teach your fellow trainees a portion of a lesson from the National Standard Curricula EMT-Basic Course. But before we go any further, let's take a moment to introduce ourselves.

790

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | C. Staff/student introductions<br>1. Activity 1.1—Icebreaker<br>2. Student motivation for attending |

791

## *ADDITIONAL INFORMATION*

### C. Staff/student introductions

One essential component of a course opening is the introductions. After you have said hello and presented a brief overview of the course, the lead instructor or the course administrator should introduce everyone on the staff that is present. Introductions should include relevant information regarding credentials and experience. Student introductions can be accomplished through the use of the following activity.

1. Activity 1.1—Icebreaker

Ask participants to write down their favorite hobby or activity (other than EMS), and to fold the piece of paper.

Collect participant responses. Place them in a box, hat, or other container.

Ask each participant to choose one piece of paper (and to let you know if they have chosen their own; every participant should have an activity that IS NOT their own).

Explain that each participant will introduce him or herself, describe their length and type of service, then talk for one and half minutes on the subject on the piece of paper.

Time participants. They will probably want to stop before time is up. Encourage them to keep going.

After the exercise, debrief. Ask participants what it was like to talk on an unfamiliar topic and what would have made the experience better.

2. Student motivation for attending

Student motivation is an important component to successful training. Find out such things as: Why are your students here? Is the training mandatory or voluntary? Are they excited about the subject matter? Are they full-time, paid EMS professionals, or are they volunteers who are attending training on their own time?

These are important questions to be answered at the beginning of a course since the answers could affect how you present material, and/or how much

*PARTICIPANT NOTES* | *LESSON PLAN*

## II. Lesson Objectives

- State the purpose and goals of the Instructor Training Program
- List the elements of an appropriate course opening
- Explain the purpose and desired result of each part of the opening

## III. Student Guide

- Course Overview
- Lessons 1-10
- Final Presentations
- Appendices

793

material you cover. For example, if you have a highly motivated group, you may go through the course faster than anticipated. In this case, you should restructure the course to add more in-depth information, and/or to include more practical exercises.

If a group is unmotivated, find out why. Address the issues whenever possible. Enlist the students' support in making the course more fun and interesting. Control is important to adult learners. If you can persuade them that they influence what occurs, they may work with you instead of against you to create a more productive learning experience.

## II. Lesson Objectives

Lesson objectives are presented at the beginning of each lesson in the Instructor Training Program. This gives you, the instructor, the opportunity to let the students know exactly what they should be focusing on during the lesson. Stating the objectives in the beginning of the lesson is another example of an advanced organizer.

In this course, it is suggested in the Instructor Notes that these objectives should be transcribed onto a flipchart page before class. However, it is just as effective to use a transparency for this purpose. You, as the instructor, should make the determination when you are preparing your materials before class. To increase student attentiveness, it is a good idea to switch between these instructional tools. The variety helps to sustain interest.

## III. Student Guide

- Course Overview—this section, although directed to the Instructor Trainer, is included in the Student Guide for reference.
- Lessons 1-10
- Final Presentations—this section includes a description and the lessons from EMT-Basic that students will refer to for their Final Presentations.
- Appendices—refer to the Table of Contents for Appendix B, References. Take a moment to familiarize yourself with these resources.

791

*PARTICIPANT NOTES* | *LESSON PLAN*

## IV. Administrative Matters

A. Course Schedule

B. Makeup policies

C. Assign Final Presentation time slots

  1. Lesson assignments

  2. Activity description

795

*ADDITIONAL INFORMATION*

## IV. Administrative Matters

### A. Course Schedule

The course schedule should be distributed and discussed.

### B. Class makeup policies

Class makeup policies should be clearly delineated. If possible, provide students with a handout indicating policy. Let them know how they can contact staff members for assistance.

### C. Assign Final Presentation time slots

It is important to the structure and flow of the Instructor Training Program to assign time slots for students to give their Final Presentations. One impartial, relatively hassle-free method to assign time slots is to draw from a hat.

1. Pre-course preparation

Prepare for this by noting the number of students in class. Review the description in the Final Presentations section. Then, make a copy of the table of contents provided and cut it up so that one lesson name appears on each page. If there are more people enrolled than lessons, these lessons can be split between two class members: Baseline Vital Signs and Sample History, Lifting and Moving Patients, and Initial Assessment.

2. Assignments

Put the lesson names into a hat and have students draw. They may trade among themselves if they like, but within a few minutes, read the list of lessons as presented in the table of contents and note the name of the student who drew each lesson. Have students present the lessons in sequence. This method prevents duplication of topics. Additionally, by the end of the training program, students will have seen a significant portion of the EMT-Basic Curriculum presented. Presenting in order will add a cohesive sense to the entire Final Presentation experience and will predetermine time slots based upon an impartial draw. Be sure to ask students to begin their resource and literature search right away. They should bring in all reference materials and props (if portable) as soon as possible.

PARTICIPANT NOTES | LESSON PLAN

## V. Facility Information

The following information should be made available to students during the opening session of the course:

- Location of restrooms
- Building information
- Exits
- Eating facilities
- Smoking policy/rooms
- Telephone and message procedure
- Emergency evacuation procedure
- Handicapped accessibility

797

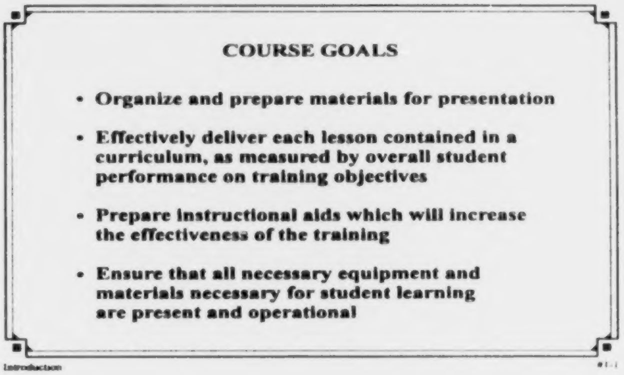
## *ADDITIONAL INFORMATION*

### V. Facility Information

## VI. Course Goals

A. Overview

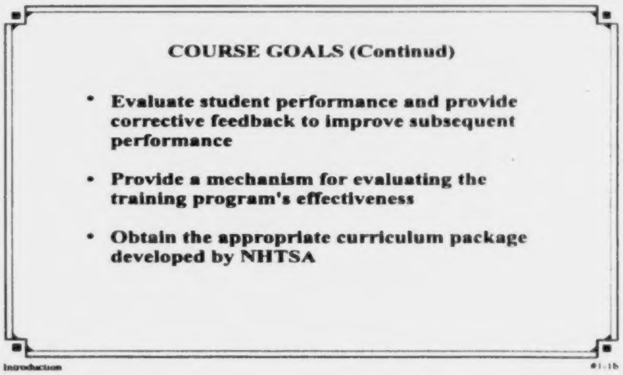
B. List of goals



**COURSE GOALS**

- **Organize and prepare materials for presentation**
- **Effectively deliver each lesson contained in a curriculum, as measured by overall student performance on training objectives**
- **Prepare instructional aids which will increase the effectiveness of the training**
- **Ensure that all necessary equipment and materials necessary for student learning are present and operational**

Introduction #1-1



**COURSE GOALS (Continud)**

- **Evaluate student performance and provide corrective feedback to improve subsequent performance**
- **Provide a mechanism for evaluating the training program's effectiveness**
- **Obtain the appropriate curriculum package developed by NHTSA**

Introduction #1-1b

*ADDITIONAL INFORMATION*

## VI. Course Goals

### A. Overview

The EMS Instructor Training Course is designed to provide students who are clinically competent in a specific content area with the instructional skills to deliver training effectively. It focuses on instructional preparation, presentation, and evaluation. Upon completion of the course, the student should be able to teach any of the curriculum packages in which they are clinically competent.

### B. List of goals

At the beginning of a course or lesson, it is important to focus the attention of your audience by clearly stating the expected outcome(s) of the instruction. Use a prepared flipchart or transparency with the objectives listed as you mention each one.

Please note that the overhead sometimes lists the course goals but does not include the opening statement. For this course, the opening statement, or stem, of each course goal is as follows:

At the conclusion of the course, the student will, at a minimum, be able to:

Notice that the stem states *who* will attain the objectives: the student, and *when* the objectives will be attained. Please read the opening statement, included in the Instructor Notes column, as you go over the course goals.

Additionally, you should mention that more specific training objectives for each lesson are presented at the beginning of each lesson, and are included on the overview page in both the Instructor and Student Guide.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | |

## VII. Expectations

A. Unspoken desires that can lead to disappointment

B. Individual expectations

C. Out-of-scope or unreasonable expectations

D. The purpose of documenting and posting expectations

## VII. Expectations

### A. Unspoken desires that can lead to disappointment

Expectations are desires, often left unspoken, that when left unsatisfied result in disappointment. To avoid disappointing your students and to ensure that everyone is focused on attainable goals, it is wise to get expectations "out on the table." The process of identifying and clarifying personal desires is a valuable mental activity and increases the probability that goals will be fulfilled.

### B. Individual expectations

Ask each student to state one skill or knowledge they believe they will develop or understand by attending this course. Be prepared to document responses.

### C. Out-of-scope or unreasonable expectations

For this course, expectations will be stated and evaluated for relevance to course topics to determine if they are realistic. Out-of-scope expectations should be identified as such. If a student expresses an unreasonable goal, engage the student in an open dialogue to think of one that can be fulfilled within the constraints of this curriculum.

### D. The purpose of documenting and posting expectations

Once you have documented expectations for each student, you have achieved several things. First of all, students are clear on what they hope to accomplish. You, the instructor, have a better feel for your audience. Also, you have documentation that you can refer back to at the end of the course. This will help to "close the circle" of instruction, confirming for participants that their time was well spent.

When you post the list on the wall, you make it clear that you take the students seriously. This gives them the sense that they will be able to influence the direction of the learning experience to best meet their own particular needs.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | E. The connection between course goals, the lesson plan, and expectations |
| | **VIII. Summary** |

803

**E. The connection between course goals, the lesson plan, and expectations**

After you post the list, be sure to tie the expectations directly to the previously established course goals. The expectations that have been identified emphasize those areas in which students feel a particular need, whether prompted by curiosity, concern, or lack of confidence. Each expectation should be addressed in the stated objectives, at either the course or lesson level.

## VIII. Summary

In this lesson the Instructor Trainer modelled how to open a course, identified key elements of a course introduction, and led a guided discussion about why each is included. Lesson 1 consisted of student and instructor introductions, lesson objectives, scheduling requirements, facility information, and stating the course goals.

We also identified individual expectations for the course in order to facilitate the Instructor Trainees' personal growth and development. Particularly in the refinement of so-called "soft skills," personal expectations can reveal valuable data to the instructor, allowing for an adjustment in the priority and emphasis of course topics.

# INSTRUCTOR ROLES AND RESPONSIBILITIES

## 2

Introduction to Various Roles ◂
Problem Students and Challenging Situations ◂
Positive, Constructive, and Corrective Feedback ◂
Team Teaching Guidelines ◂
Instructor Attributes ◂

# INSTRUCTOR ROLES AND RESPONSIBILITIES

## *OVERVIEW*

**Suggested instructional time for this lesson:** 2 hours

### Introduction

Generally speaking, instructor performance falls into three broad categories: preparation, delivery, and evaluation. However, many responsibilities arise within the context of these major job functions, with skill requirements in diverse areas such as communication, logistics, administration, ethics, public speaking, and equipment oversight. This lesson presents comprehensive descriptions of various roles and offers guidance to the novice or experienced instructor in how to serve students with care and competence.

### Lesson Objectives

Through group discussions, question and answer sessions, and simulated instructional situations (roleplays), the EMS instructor trainee will be able to:

- Define five instructor roles
- Demonstrate the ability to use three types of feedback appropriately
- List two guidelines for effective team teaching
- List four attributes of an effective instructor

### Materials Needed

- Overhead projector and screen
- Flipchart (prepared prior to class)

### Instructional Strategies

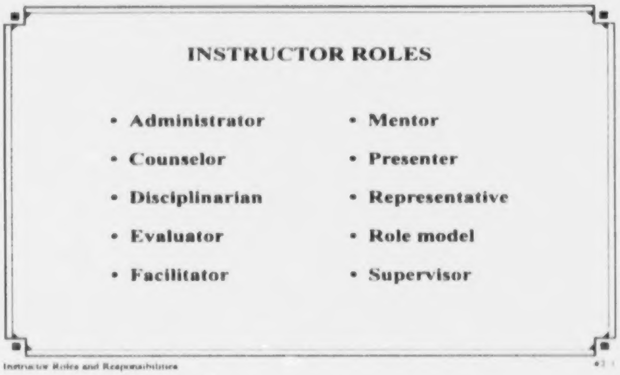
- Lecture
- Discussion
- Question and answer
- Visual aids
- Roleplay scenarios

BEST COPY AVAILABLE

*PARTICIPANT NOTES* | *LESSON PLAN*

## Lesson Objectives

## I. Instructor Roles and Responsibilities



**INSTRUCTOR ROLES**

- **Administrator**
- **Counselor**
- **Disciplinarian**
- **Evaluator**
- **Facilitator**
- **Mentor**
- **Presenter**
- **Representative**
- **Role model**
- **Supervisor**

Instructor Roles and Responsibilities

A. Administrator

1. Function
2. Characteristics

*ADDITIONAL INFORMATION*

## I. Instructor Roles and Responsibilities

### A. Administrator

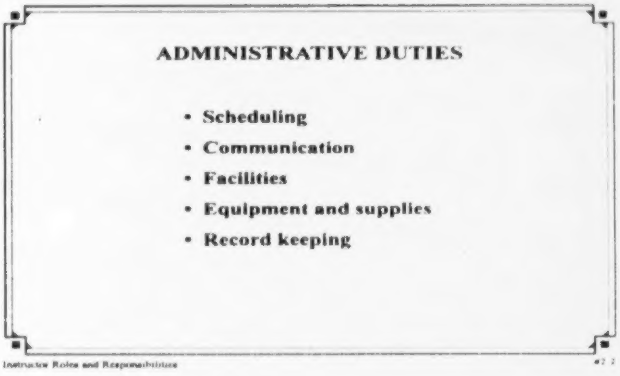
1. Function

As an administrator, you may be responsible for overall course operations and logistics.

2. Characteristics

An effective administrator must be organized and detail-oriented. Additionally, effective communication skills are required, because as an administrator you often have to orchestrate a number of diverse personalities.

3. Administrative duties



**ADMINISTRATIVE DUTIES**

- Scheduling
- Communication
- Facilities
- Equipment and supplies
- Record keeping

Instructor Roles and Responsibilities #2.2

4. Designated course administrator's role

B. Counselor/advisor

1. Function
2. Characteristics

809

*ADDITIONAL INFORMATION*

3. Administrative duties

Administrative duties include course scheduling and planning, such as arranging for the instructional facilities. You will need to ensure that the room is large enough for all activities, note whether a particular course has a recommended room configuration, and handle the logistics of room setup. Also, you must determine equipment requirements and make sure everything is in working order. The selection of visual aids and references (such as journal articles) is an administrative duty that should be done well in advance of the course so that appropriate numbers of copies can be made.

Correspondence with the student is another administrative responsibility. The enrollment confirmation, and possibly a screening process for admission will have to be considered.

Typically, student records will need to be kept and possibly forwarded to the appropriate offices. When state-specific certification requirements exist, student records are included in the evaluation process.

4. Designated Course Administrator's Role

Many times an individual other than the instructor is the designated course administrator, e.g., the Course Coordinator. This person is responsible for the overall operation of the course, but many administrative duties are shared. Typically, the administrator's responsibilities involve logistics and operations, while the instructor is concerned with course content, delivery, and instructional aids.

**B. Counselor/Advisor**

1. Function

As a counselor, students depend on you for advice and good judgment.

2. Characteristics

In order to serve effectively as a counselor, you must demonstrate the characteristics of being trustworthy, empathetic, and an active listener.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | 3. Establish an open and trusting relationship<br>4. Purpose<br>C. Disciplinarian<br>1. Functions as a coach<br>2. Sets and enforces standards |

311

3. Establish an open and trusting relationship

Exhibiting these characteristics lays the foundation for an open and trusting relationship. To earn and maintain your students' trust, stress the confidentiality of your communication. This is vital. Students must be assured they can communicate honestly and openly.

4. Purpose of counselor/advisor

The purpose of an advisor or counselor is to offer guidance and assistance to students on an as needed basis, as appropriate within the instructor's role. When circumstances affect classroom performance, it is entirely appropriate for instructors to discuss the situation with the student and to work with them whenever possible to help them to deal effectively with both home and family obligations and EMS career objectives.

However, it is important to remember that one cannot be all things to all people. It is neither necessary nor appropriate for an instructor to take on the responsibilities of counseling students regarding their personal life; this is better addressed in a therapeutic setting outside the classroom. In these cases, an instructor should refer students to community resources.

**C. Disciplinarian**

1. Functions as a coach

As a disciplinarian, the instructor establishes standards of behavior and requires compliance to the standards. This is perhaps best described as a "coaching" role. To be effective, consequences for non-compliance must be made known and enforced consistently.

2. Sets and enforces standards

It is not easy to discipline effectively. However, keep in mind that it is easier to "loosen up" than to get tough. A good coach is very clear about what is expected and equally clear about the consequences of non-compliance. In EMS courses, non-compliance to standards established in the classroom may mean the student is not ready to assume the on-the-job responsibilities of an EMS professional. These are critical skills and it is appropriate to establish high standards during training.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | 3. Problem students and challenging situations<br>a. Hesitant student<br>b. Monopolizing student<br>c. "Voice of Experience" student |

813

*ADDITIONAL INFORMATION*

3. Problem students and challenging situations

At times you may encounter students who are uncooperative or disruptive, for whatever reason. The best way to handle these students is to be *respectful*, yet *assertive* and *directive*. Remember you are in charge, but don't insult them. Speak with them on a break, rather than correcting them in front of others.

When you are leading training or giving a presentation, you will inevitably encounter various personality types. Classroom behavior resulting from various personality types can create situations that will need to be dealt with. How you handle these situations can affect the attitudes of all the participants and the success of the course. Listed below are some characteristics and tips for handling different types of participants.

a. Hesitant student

This person is shy, reluctant, and silent most of the time. Strategies for dealing with the hesitant student include using small group activities, calling on them from time to time to answer non-threatening questions (ones you know they can answer), and offering encouraging statements that let them know that their contributions are worthwhile and appreciated.

b. Monopolizing student

This student tends to be opinionated and likes to dominate class discussions. This type of student can dampen the enthusiasm of the other students, who may need clear openings and encouragement to participate. Some statements to use with this type of student are: "I'd like to get another opinion on this issue," or "I appreciate your input, but everyone needs an opportunity to participate."

c. The "Voice of Experience" student

Closely associated with the monopolizing student, this person has a tremendous need to be heard as well. S/he likes to display his/her knowledge to everyone by using big words, lots of statistics, even occasional name dropping. Always be polite, but maintain control of the discussion by saying the group needs to move to the next topic. If this person is knowledgeable, give them a task, or even a leadership role. Another tactic is to administer a test that you know is difficult, but which is at the level that they claim to be. When it

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | d. Non-listening students<br>e. Idea-zapping students<br>f. Complaining or negative students |

315

is made clear that there are things they don't know, they will more than likely be ready to learn.

d. Non-listening student

At times, a student's attention may wander. One strategy to refocus a non-listener is to ask something like this: "Could you take what Carol has just said and explain it another way?" Or, ask "How does your viewpoint compare with what has been expressed?"

If multiple students seem to be "tuning out," it could be a cue to you that a break is needed, the instruction is not "hitting home," or there is an environmental distraction that needs to be dealt with.

e. Idea-zapping student

This person is an expert at putting down the ideas of others. S/he finds creative ways to inhibit suggestions or cast doubt on solutions. This can seriously undermine small group interaction as well as classroom discussion, so be sure to watch for this as groups break out to develop their lesson plans.

During discussions, rescue an attacked idea before the whole group dismisses it by making concrete statements that confirm potential usefulness. Then, ask the idea-zapper to come up with an idea of his/her own.

f. Complaining or negative student

Masters of blame and fault-finding gripers exist just about everywhere. Stop a complainer in their tracks by asking questions that force the person into a problem-solving mode, such as "What steps do you feel are necessary to correct this situation?" Also, it can help to say "I understand" occasionally, depending upon the reason for the negative attitude.

*PARTICIPANT NOTES* | *LESSON PLAN*

   g. Rigid viewpoints
   h. Hostility and anger
   i. The "Clown"

4. Feedback

817

*ADDITIONAL INFORMATION*

g. Rigid viewpoints

This type of person will take a position on an issue and not want to move from it. S/he can make it difficult for the group to make progress. Try to get this type of person to admit there is another side to every issue. One strategy is to ask the student to clearly state the rationale behind an opposing viewpoint.

h. Hostility and anger

Some students can be antagonistic, aggressive, and unfriendly. Fortunately, adult learners typically have a strong internal motivation to be involved in instruction, so "bad attitudes" in general are relatively rare. The exception would be that adults might be more likely to contest results that prevent them from achieving their goals, such as a test score that is inadequate to receive certification.

If the problem is administrative or grade-related, refer the student to the appropriate grievance procedure. See Lesson 2, Legal Implications, for more information on this topic. If you run into an inexplicably angry student in the classroom, avoid getting wrapped into a debate. Keep your cool and respond in a mild, objective manner. Sometimes activities can redirect energy toward accomplishing a specific task. There is nothing like success to turn a negative attitude around.

i. The "Clown"

This type of student hinders group progress with an abundance of inappropriate humor. Strategies for dealing with a "clown" include complimenting him/her when s/he makes a worthwhile contribution and never rewarding attempts at inappropriate humor with laughter. During a serious dialogue, remember to ask this individual to contribute.

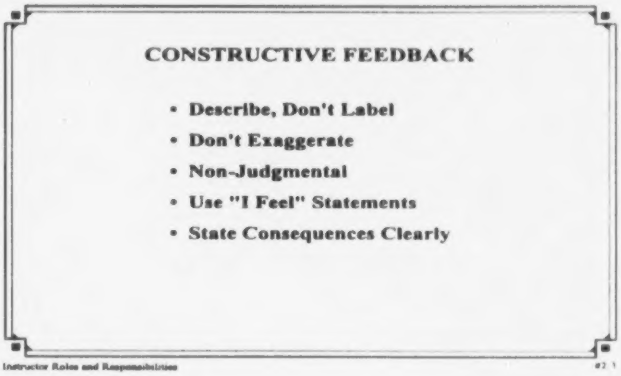
4. Feedback

For whatever reason the role of disciplinarian becomes necessary, an instructor can coach students to help overcome performance difficulties. One way to do this is to provide appropriate feedback. Most of the strategies that we just mentioned for dealing with problem students and challenging situations involved the use of feedback.

*PARTICIPANT NOTES* | *LESSON PLAN*

a. Positive feedback

b. Constructive feedback

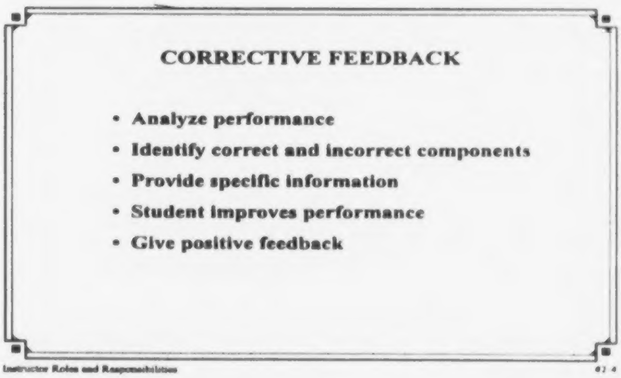


**CONSTRUCTIVE FEEDBACK**

- Describe, Don't Label
- Don't Exaggerate
- Non-Judgmental
- Use "I Feel" Statements
- State Consequences Clearly

Instructor Roles and Responsibilities #2.3

c. Corrective feedback



**CORRECTIVE FEEDBACK**

- Analyze performance
- Identify correct and incorrect components
- Provide specific information
- Student improves performance
- Give positive feedback

Instructor Roles and Responsibilities #2.4

## *ADDITIONAL INFORMATION*

Feedback is part of all effective communication, in challenging situations and in those that progress without difficulty. Instructors need to give different kinds of feedback, as each situation demands.

a. Positive feedback

Positive feedback reinforces desirable behavior. Positive feedback is a great "morale booster" because it removes doubt, builds self-esteem, and results in a sense of accomplishment.

b. Constructive feedback

Constructive feedback helps change undesirable behavior. Concentrate on how *you* feel when giving constructive feedback. Use "I feel" statements. For example, don't say, "When are you going to stop being late for class?" Say, "I feel annoyed when you are late for class."

Factors to remember when giving constructive feedback are:

- Describe the behavior about which you are giving feedback; be specific
- Don't use labels such as "immature" or "unprofessional"
- Don't exaggerate; it heightens emotions
- Don't be judgmental; it produces defensiveness
- Use "I feel" statements
- State consequences calmly and clearly

c. Corrective feedback

Corrective feedback is used to improve student performance incrementally. This technique involves analyzing performance, identifying correct and incorrect components, and communicating specific information that the student can use to make subsequent performance improve. This should be a positive learning experience and part of the on-going, informal evaluation process. Corrective feedback lets students know where they stand, thereby reducing frustration and tension in the classroom. It also prevents students from assuming everything is just fine; that "No news is good news." This prevents problems later, during formal evaluations.

*PARTICIPANT NOTES* | *LESSON PLAN*

D. Evaluator

  1. Function

  2. Evaluation methods

## *ADDITIONAL INFORMATION*

Principles of corrective feedback include:

- Be descriptive, e.g. your hand was in the wrong position
- Be specific, e.g. your assessment of the patient's eyes did not include a pupil check
- Be private; students don't like to be embarrassed in front of peers
- Be positive; find something good in every performance. Make corrections in a positive manner and summarize, emphasizing those things that were done the best
- Be concise; give information in manageable chunks. Don't try to change everything at once
- Be timely; immediately post performance, if student is ready to listen.

### D. Evaluator

1. Function

In your role as an evaluator, you compare performance against standards. The standards should be clearly stated in the lesson objectives.

2. Evaluation methods

A variety of informal and formal methods can be used to evaluate student progress.

These include:

- Written and Oral Tests/Quizzes
- Essay Questions
- Practical Exams
- Project Assignments
- Observational Reports
- Presentation Checklists
- Peer Review
- Question and Answer

Refer to Lesson 7, Evaluation, for in-depth information on this subject.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | E. Facilitator<br>1. Function<br>2. Facilitative teaching<br>a. Comprehension increases<br>b. "Processing and application" time<br>3. Adult learners<br>4. Promote active learning |

323

**E. Facilitator**

1. Function

As a facilitator, the instructor aids or assists the student in the learning process. This is accomplished by using facilitation skills to make the students feel free to comment and ask questions.

2. Facilitative teaching

a. Comprehension increases

In facilitative teaching, the emphasis is on student involvement in the learning process. Students are not just passive recipients of your presentation. Consequently, the student influences the delivery of material more than in traditional, lecture-only formats. There are advantages and disadvantages to a student-paced delivery. Comprehension is likely to increase, but scheduling can be affected.

b. "Processing and application" time

To accommodate this, course schedules should provide for "processing and application" time. Use your observation skills to help you assess how the presentation is being received. Based upon these observations, you can decide to continue as planned or to modify the presentation to respond to the audience's needs.

3. Adult learners

The facilitator role is particularly adaptive to the adult learner. Adults have an increased need for material that is relevant to their lives and work, and an increased desire for a collaborative learning climate. They also typically have a strong internal motivation to acquire specific knowledge.

4. Promote active learning

Good facilitators stress the practical application of information, relate material to student experiences, and offer concrete examples to illustrate concepts.

*PARTICIPANT NOTES* | *LESSON PLAN*

F. Mentor

1. Function
2. Mentor profile
3. Mentor/protege relationships

G. Presenter

1. Function
2. Use plausible, relevant, vivid examples

*ADDITIONAL INFORMATION*

### F. Mentor

1. Function

A mentor is a person who facilitates personal and professional growth.

2. Mentor profile

Good mentors are generally high achievers, and are confident of their own position within the EMS community. Consequently, they don't feel threatened by student excellence and achievements. Mentors motivate students and encourage their professional growth. Instructors, in their role as mentors, serve as role models for students. As such, you should be proud to be an EMS professional and look for ways to promote your students and expose them to new opportunities and challenges within the EMS profession.

Another characteristic of good mentors is that they recognize the unique strengths of each student, while being aware of and accepting his/her weaknesses and vulnerabilities.

3. Mentor/protege relationship

A mentoring relationship can be a natural outgrowth of the instructor/student association. However, if a relationship develops, you must ensure that you do not show preference or favoritism to your protege as a student. All students should be treated equally and fairly.

### G. Presenter

1. Function

Perhaps one of the most visible roles of the instructor is that of presenter. Effective presenters must be able to gain and maintain their audience's attention.

2. Use plausible, relevant, vivid examples

One of the best methods for making information come to life is to make it real; use plausible, relevant, vivid examples. For instance, when discussing the importance of the assessment-based rather than diagnostic approach, offer a real-life scenario with serious consequences. For example, a premature

*PARTICIPANT NOTES* | *LESSON PLAN*

H. Representative

1. Function
2. Characteristics
3. Standard curricula

827

conclusion regarding a patient's condition could delay appropriate intervention and treatment, perhaps threatening the life of the patient.

## H. Representative

### 1. Function

Another important role for the instructor is that of representative, an authorized delegate of state and national EMS organizations. S/he can also act as a representative to local government.

### 2. Characteristics

Representatives must be professional and highly qualified. In addition to the immediate concerns of the local EMS unit, they must also be aware of state and national organizational goals and standards.

### 3. Standard Curricula

States can adopt, not adopt, or adopt and modify standard curriculum which is developed by NHTSA. Instructors are required to teach the standard curriculum that has been adopted by their state. Once certified, instructors are required to teach all of the elements of the standard curriculum.

They can enhance, but not delete any of the content. They must meet all of the objectives. They are obligated to adhere to the curriculum content and objectives because of certification requirements.

Consequences of failure to teach according to the established standard curriculum may include loss of certification or even a lawsuit. For example, suppose an instructor doesn't agree with a standard of care or treatment practice and chooses to instruct students to a different standard or practice. Students then go out on the job and employ non-standard practices or standards of care. If a patient were to experience any unacceptable result, and it was determined that a non-standard practice was performed, the patient could sue the service, the EMS technician, and the instructor.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | I. Role model<br>1. Function<br>2. Characteristics<br>J. Supervisor<br>1. Function<br>2. Assistant/guest instructors<br>a. Valuable role of assistant/guest instructors |

329

## *ADDITIONAL INFORMATION*

**I. Role model**

1. Function

Role models serve as examples of achievements, positive attitudes, and admirable characteristics.

2. Characteristics

It is important for instructors to maintain high standards, both professionally and personally. Hard work, dedication, and a genuinely caring manner are desirable traits in an EMS instructor. Inevitably, role models are imitated because, as the old proverb goes, "Imitation is the sincerest form of flattery." Knowing this, an instructor's behavior must be exemplary.

**J. Supervisor**

1. Function

A supervisor directs and inspects performance.

2. Assistant/guest instructors

a. Valuable role of assistant/guest instructors

As an EMS course instructor, there will probably be times when you will work with and supervise guest instructors or assistants. EMS curricula are often skills-based, designed to train EMS professionals for on-the-job performance. To this end, practical skills labs are frequently employed in training to prepare students to successfully demonstrate performance in their state's Practical Exams.

In order to conduct these labs effectively, assistants and/or guest instructors must be available to monitor, train, and evaluate student performance in small groups. One of the administrative responsibilities of conducting a course is to recruit qualified assistants. Often the designated course administrator will handle this, but the primary instructor may be called upon to do so as well.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | b. Coordination of equipment and instructional aids<br>c. Ensuring continuity between sessions<br>d. Professional conduct<br>3. Team teaching (Dos & Don'ts)<br>a. Advantages |

831

*ADDITIONAL INFORMATION*

b. Coordination of equipment and instructional aids

It is your responsibility as the lead instructor to determine the equipment and material requirements for each module, and to work with the other instructors to ensure all requirements are met. Generally, the course administrator will handle logistics, while you will ensure the content is adequately supported with appropriate instructional aids, etc.

c. Ensuring continuity between sessions

You will also be responsible for monitoring the assistant/guest instructor's presentation to ensure continuity between sessions and coverage of all requirements.

d. Professional conduct

Professional conduct is important among the staff, as well as in the student/instructor relationship. Team work among staff members results in positive outcomes not only for the students in the course, but for the EMS community as a whole. Teamwork is precisely what is required in the trauma unit or at an accident site.

3. Team Teaching (Dos and Don'ts)

a. Advantages

There are times when a team teaching approach provides significant advantages to students. For example, when an instructional strategy requires a lot of one-on-one interaction between the instructor and students, a team approach becomes necessary.

Remember, there is an art to team teaching. It requires a sensitivity to your colleague's teaching style, body language, and speaking patterns. Up front planning can greatly enhance the team's effectiveness once they are "on stage."

Some things about team teaching to consider include:

- Diverse teams offer a broad range of expertise and generally enhance facilitator credibility

*PARTICIPANT NOTES* | *LESSON PLAN*

b. Avoiding common pitfalls

c. Guidelines

333

*ADDITIONAL INFORMATION*

- A variety of classroom or group interaction styles and voices will hold the audience's attention longer
- Increasing the facilitator-to-participant ratio allows for more individual attention during group exercises and case studies
- A team approach can add a dynamic synergy to the teaching experience and enhance creativity through the interaction of team members
- Two or more facilitators help keep the course moving better; e.g., one facilitates and the other writes on the flipchart/overhead

b. Avoiding common pitfalls

In order to make the most of a team teaching experience, it is wise to plan ahead to avoid common pitfalls. Ensuring continuity between sessions is a major concern. For example, if one instructor teaches the class how to do lower extremity splinting on the first night and the second teacher presents upper extremity splinting on the second night, they must be consistent. Otherwise, students will become confused.

Be sure to address the following items in order to avoid problems:

- Identify the relative strengths of each team member
- Arrange participation to maximize each member's strengths
- Agree on how to handle interactions, disagreements, etc.
- Agree on how to transition from one instructor to the other
- Plan to debrief afterward

Team teaching is like learning how to dance; it is important to avoid stepping on your partner's toes.

c. Guidelines

By following some common sense guidelines, you'll make the most of the team's collective talent. Remember, the goal of instructor-led training is to create a learning environment that best meets the needs of the participants. Be attentive and interested while in session with another instructor. And facilitate teambuilding by consistently backing each other up: in the classroom, with resources, and when handling problems.

## II. Instructor Attributes

A. Characteristics of effective instructors

## II. Instructor Attributes

### A. Characteristics of effective instructors

Every instructor displays an individual personality, yet there are certain similarities amongst those who are truly effective. The most highly rated instructors are knowledgeable about the subject matter, effective in transmitting that information, motivated to provide the best instruction possible, and concerned about their students.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|

B. Ethical
  1. Definition
  2. Ethical conduct essential
  3. Lack of ethics affects credibility

C. Fair
  1. Definition
  2. Student rights

337

*ADDITIONAL INFORMATION*

## B. Ethical

1. Definition

An ethical person behaves in accordance with the established moral principles that govern the conduct of a group.

2. Ethical conduct essential

A part of the teacher/student relationship is trust. An instructor must behave in an ethical fashion to inspire confidence and build trust.

3. Lack of ethics affects credibility

Failure to behave according to agreed upon and expected moral principles, such as fairness, integrity, and honor, leads to a loss of credibility.

## C. Fair

1. Definition

A fair instructor is not subject to prejudice that inhibits judgment. While everyone has personal preferences and biases, as an instructor, you must deal with students in an impartial manner regardless of your preferences.

2. Student rights

When instructor preferences interfere with impartial judgment, students are denied fundamental rights. Students have the right to be treated fairly. They have the right to be heard and understood. They have the right to receive an objective presentation of information and an impartial evaluation of their mastery of course objectives. Instructors must understand and compensate for personal preference for this to occur.

For example, certain cultures esteem authority to a greater degree than others. Students from these cultures may find it difficult to offer their opinions without feeling that they have overstepped unseen boundaries.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | 3. Effects of bias<br>4. Legal implications<br>D. Professional<br>1. Definition<br>2. Attire |

839

*ADDITIONAL INFORMATION*

If you, as an instructor, find a lively and somewhat challenging group more stimulating, you may tend to believe a quiet student is less invested in the course. This may be far from the truth, and it is your responsibility to gather data from many sources and to render objective judgements. If interaction is essential to a student's success, you need to let them know that, and solicit their input.

3. Effects of bias

When the instructor is biased or dismisses a student's ideas, learning is inhibited and students lose respect for the instructor. Material should be presented in such a way that the experiences of the adult student are acknowledged and respected.

4. Legal implications

There are legal implications to biased instruction, whether in attitude, delivery, or evaluation. See Lesson 2, Legal Implications, for more information on gender, race and disability, as well as sexual harassment and sexual preference issues.

**D. Professional**

1. Definition

Professional conduct entails the appropriate presentation of self in demeanor, attire, humor, etc. Because instructors serve as a role model for students, professional behavior is essential. Students look to instructors for guidance. Professional conduct requires attention to attire, attitude, and behavior.

2. Attire

For practical exams and field exercises, instructor attire should be neat and clean, yet comfortable. In the classroom, business dress is often more appropriate. Use discretion and dress according to the subject matter, environmental conditions, and local practice, keeping in mind that your attire strongly influences how you are perceived.

340

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | 3. Attitude<br>4. Behavior<br>E. Prepared<br>1. Facilities, equipment, instructional aids<br>2. Schedule<br>3. Know your material<br>F. Giving and earning respect<br>1. Definition<br>2. Giving respect |

841

3. Attitude

Instructors should have a helpful and supportive attitude toward students.

4. Behavior

Being a professional means being well-prepared and organized. It also requires treating both staff and students with respect, as we have discussed earlier.

**E. Prepared**

1. Facilities, equipment, and instructional aids

It is important to check out the equipment, visual aids, facilities, and materials long before the students arrive. It's almost impossible to be *too* thorough when planning and confirming arrangements for a course.

2. Schedule

Start sessions on time. As much as possible, adhere to the published schedule. If class participation results in a longer class, mention this fact, and get agreement from the class on ways to adapt, e.g., fewer breaks. Remember, you are teaching adults.

3. Know your material

As we have mentioned before, knowing the material you will teach is essential to ensure learning and to maintain your credibility.

**F. Giving and earning respect**

1. Definition

The term respect means to feel or show esteem for another.

2. Giving respect

Respect entails a willingness to show consideration or appreciation. It is an essential ingredient to positive, productive relationships. Students have a right to be treated with respect.

*PARTICIPANT NOTES* | *LESSON PLAN*

3. Earning respect

4. Respect creates a supportive learning environment

5. Problem students

## III. Roleplay Activity

A. Model the responses you feel would be most appropriate given what you have learned about instructor roles and responsibilities

B. Apply the guidelines for positive, corrective, and constructive feedback

343

3. Earning respect

The respect of students is earned by modeling correct behavior. Show genuine interest, be ethical, and be fair. Live up to high standards personally and professionally and you will earn their respect.

4. Respect creates a supportive learning environment

The instructor/student relationship is most productive in a climate of mutual respect. When a student fears a sarcastic response, they hesitate to participate, and learning is inhibited. On the other hand, when you show consideration and appreciation for your students, they will trust and respect you. A supportive training environment is created, and your students will not hesitate to seek clarification if they lack understanding.

5. Problem students

As we mentioned earlier, occasionally as an instructor you will encounter "problem students." In these cases, it is important to show respect even if you do not feel it. This establishes a foundation upon which you can demand like treatment. Common courtesy can prevent a difficult situation from deteriorating, particularly if emotions intensify.

On the other hand, you cannot allow a course to become side-tracked by irrelevant issues. If you feel that student comments or questions digress from the focus, determine the significance of the topic that has been introduced then reiterate the goals and objectives for the section or discussion. If the new area is outside the scope, respectfully acknowledge the importance of the new area and offer sources of information if available, but then redirect the class back to the topic at hand.

## III. Roleplay Activity

Refer to Appendix A, Activity Materials. Students will be given scenarios and will model appropriate instructor roles, responsibilities, and responses based upon the information in this lesson. They should apply the guidelines for positive, corrective, and constructive feedback during each roleplay exercise.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | **IV. Summary** |
| | **References** |

845

*ADDITIONAL INFORMATION*

## IV. Summary

This lesson outlined the many roles, responsibilities, and attributes of EMS instructors and offered guidelines for functioning effectively in each role.

## References

HUD Mentoring Program Train-the-Trainee Guide, Developed by ASA, April 1995

# LEGAL IMPLICATIONS

## 3

- Harassment ◂
- Discrimination ◂
- Americans with Disabilities Act of 1992 (ADA) ◂
- Confidentiality ◂
- Recourse ◂
- Negligence ◂
- Occupational Health and Safety Act (OSHA) ◂
- Documentation ◂

847

# LEGAL IMPLICATIONS

## *OVERVIEW*

**Suggested instructional time for this lesson:** 1-1/2 hours

### Introduction

Legal and ethical issues are a vital element of daily life for emergency medical personnel. What should an emergency medical technician (EMT) do if an accident victim refuses care? Can a child be treated when her parents are not at home? These issues arise daily for EMS professionals. It is important to familiarize instructor trainees, not only about those issues which, through legislative action, regulate employment practices, but also about legal issues that apply in a training environment.

### Lesson Objectives

Through group discussion and question and answer sessions, the EMS instructor trainee will be able to:

- Define harassment and explain how the law applies to instructors
- List the elements of an equal opportunity statement
- Describe informal and formal grievance procedures
- State two responsibilities instructors must fulfill toward students
- State the four essential elements in a claim of negligence and explain each
- State three duties of the instructor that, if breached, could result in a negligence claim

### Materials Needed

- Overhead projector and screen
- Flipchart (prepared objectives)
- Flipchart and markers

### Instructional Strategies

- Lecture
- Discussion
- Question and Answer
- Visual Aids
- Activities
- Guest Lecturer

*PARTICIPANT NOTES* *LESSON PLAN*

## Lesson Objectives

### I. EMS Instruction

A. Exponentially increased impact

B. Possible problems in the EMS system

- Declining volunteerism
- Turf problems
- Political problems
- Budget problems

C. Responsibilities as EMS instructors

1. All contractual obligations must be met

849

*ADDITIONAL INFORMATION*

## I. The opportunity and responsibility of teaching

### A. Exponentially increased impact

By teaching, EMS instructors can do a great deal for their community. Each individual instructor can only care for a certain number of people, but through teaching others, many people can be trained to serve their communities.

By teaching, EMS instructors have a great responsibility. The well-being of every future patient of every student depends upon how well we do our jobs as teachers.

### B. Possible problems in the EMS system

1. Declining volunteerism
2. Turf problems
3. Political problems
4. Budget problems

Despite these problems, the EMS system works well. It works well because of the work you put into it.

### C. Responsibilities as EMS instructors

1. All contractual obligations must be met

All courses must be taught according to the proposed curriculum. If the course is due to meet every Tuesday and Thursday for 9 weeks, and the instructor dismisses the class early on Thursdays to coach his child's soccer team, could a student who fails the course and the state test sue you?

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| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | 2. Clearly defined standards<br>3. Respectful and fair treatment<br>**II. Legal issues and their classroom application**<br>A. Regulation of employment practices |

851

2. Clearly defined standards

Students must know what is expected of them. They must also be kept up-to-date on their performance levels. Instructors must provide written notice of exactly why a student is deficient and what they can do, if anything to remedy the deficiency. They must be given a chance to have more than one evaluator check their work, to avoid "s/he doesn't like me" claims. This is particularly important if the evaluator works for a competitor or has other conflicts of interest.

3. Respectful and fair treatment

Students and instructors have the right to be treated with respect and to receive fair treatment. If a conflict arises, the parties involved are encouraged to follow an appropriate grievance procedure. Grievance procedures may be available through the facility where the course is held or within state and local organizations sponsoring the course. If no procedure has been formalized, it is advisable to create one. See the section below for more information about both informal and formal processes.

## II. Legal issues and their classroom application

Instructors will be held accountable for transgressions in the classroom in much the same way as employers and workers are accountable in the workplace.

### A. Regulation of employment practices

For issues that specifically regulate employment practices and not training environments, instructors need to be aware of legislation and inform students. National Standard Curriculum courses are performance-based, used to prepare EMS professionals for on-the-job experiences. Guidance on applicable legal issues, such as patient care and consent, are included in many of the National Standard Curriculum courses. Even when course materials do not include specific information on legal concerns, instructors should take a proactive, preventative stance. Consult with the institute or sponsoring agency counsel for state-specific laws, regulations, and for the interpretation of policy. In the discussion of negligence later in this lesson, we will look at both the work environment application and negligence in the classroom.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|

B. Instructor accountability

## III. Harassment

A. Types of harassment

B. Sexual harassment

1. Definition

853

**B. Instructor accountability**

Instructors need to be aware that they will be held accountable for their behavior. Practices, standards, and behaviors that are regulated or proceduralized will be discussed in this lesson in terms of the legal recourse that can be taken for alleged misconduct. Additionally, the organization sponsoring the training, for which the instructor functions as a representative, can also be held liable for instructor misconduct, as well as the facility in which the course is being held.

## III. Harassment

A. Types of harassment

Harassment includes all behavior that serves to embarrass, demean, disgrace, humiliate, or intimidate another. Even though some behavior may seem acceptable, if it is embarrassing or intimidating to another, it constitutes harassment. Therefore, as an instructor, professional conduct is essential. Racy jokes may be welcomed by some, but they are inappropriate in the classroom, because they may offend others. Remarks intended as a joke may be intimidating to a sensitive student, e.g., kidding about an exam grade.

B. Sexual harassment

Sexual harassment is illegal in the workplace and the classroom, according to *Title VII of the 1964 Civil Rights Act*. Instructors must be aware that their behavior, even if intended as friendly banter, can be misinterpreted. Individuals who believe themselves to have been sexually harassed have recourse through the legal system.

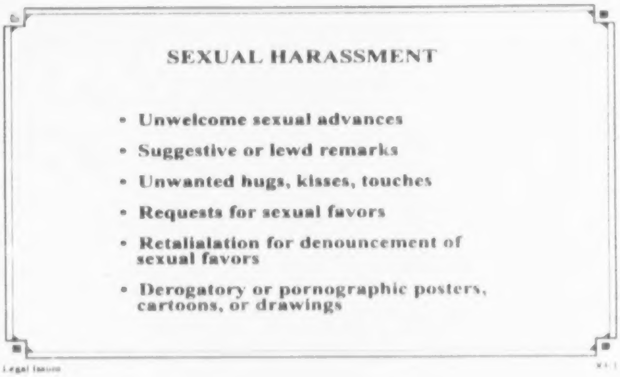
1. Definition

Sexual harassment is defined as any unwelcome sexual advances, requests for sexual favors, or conduct of a sexual nature when:

- Submission is implicitly or explicitly made a condition of employment
- Submission/rejection is used as the basis for an employment decision
- Conduct substantially interferes with work performance

PARTICIPANT NOTES | LESSON PLAN

2. Examples



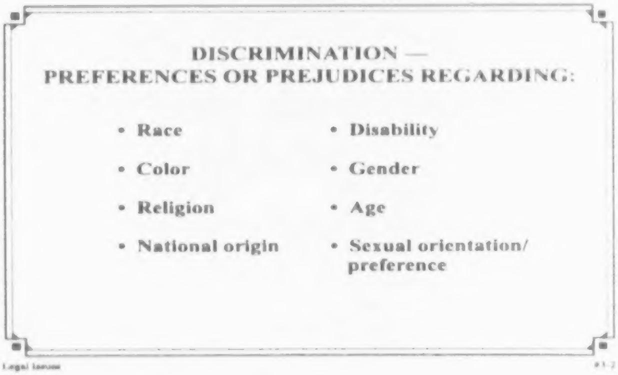
**SEXUAL HARASSMENT**

- Unwelcome sexual advances
- Suggestive or lewd remarks
- Unwanted hugs, kisses, touches
- Requests for sexual favors
- Retaliation for denouncement of sexual favors
- Derogatory or pornographic posters, cartoons, or drawings

Legal Issues

## Discrimination IV.

A. Preferences vs. prejudices



**DISCRIMINATION —
PREFERENCES OR PREJUDICES REGARDING:**

- Race
- Color
- Religion
- National origin
- Disability
- Gender
- Age
- Sexual orientation/preference

Legal Issues

B. Equal opportunity statement

- Conduct creates an intimidating, hostile, or offensive environment

2. Examples

Some behaviors that have been identified as sexually harassing are:

- Unwelcome sexual advances
- Suggestive or lewd remarks
- Unwanted hugs, kisses, touches
- Requests for sexual favors
- Retaliation for complaining about sexual harassment
- Derogatory or pornographic posters, cartoons, or drawings

## IV. Discrimination

### A. Preferences vs. Prejudices

Everybody has individual preferences. Discrimination occurs when preferences lead to the unfair treatment of other individuals who may have different preferences or attributes. Preferential treatment of a favorite student is another form of discrimination. All students should be treated equally.

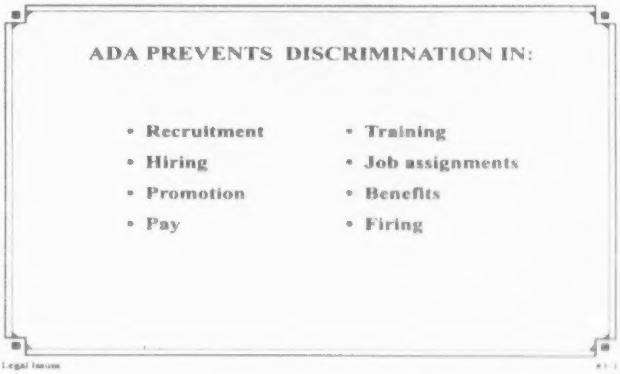
### B. Equal Opportunity statement

The EMS community is committed to the principle that access to study or employment opportunities be accorded to each person on the basis of individual merit and without regard to race, color, religion, national origin, disability, gender, sexual orientation/preference, or age (except where these factors are bona fide occupational qualifications).

PARTICIPANT NOTES | LESSON PLAN

C. Americans with Disabilities Act (ADA)

1. Purpose of the Act



**ADA PREVENTS DISCRIMINATION IN:**

- **Recruitment**
- **Hiring**
- **Promotion**
- **Pay**
- **Training**
- **Job assignments**
- **Benefits**
- **Firing**

Legal Issues

2. Definitions

- Disability
- Major life activities
- Essential job function
- Reasonable accommodation

3. Job analysis and functional job descriptions

*ADDITIONAL INFORMATION*

## C. Americans with Disabilities Act of 1992 (ADA)

1. Purpose of the Act

Specific legislation prevents discrimination against mentally or physically challenged individuals, under the Americans with Disabilities Act of 1992 (ADA). The intent of ADA is to prevent job discrimination in all employment practices, including recruitment, hiring, promotion, training, pay, job assignments, benefits, firing, etc.

ADA specifically addresses the employment of a qualified applicant with a disability, who can perform essential job functions, with or without reasonable accommodation. NOTE: ADA does not impose affirmative action obligations.

2. Definitions

*Disability*: physical or mental impairment that substantially limits a major life activity.

*Major life activities*: hearing, seeing, breathing, performing manual tasks, walking, caring for oneself, learning, or working

*Essential job functions* are those basic job duties essential to performance.

*Reasonable accommodation* must be provided, unless it would be an undue hardship, defined as a significant difficulty or expense.

3. Job analysis and functional job descriptions

Functional job descriptions define exactly what the basic duties will be in specific jobs, such as a paramedic. These duties may include such things as lifting stretchers into an ambulance. If a person's disability precludes them from performing essential job functions, it is not discriminatory to refuse employment in that particular position.

Within the EMS profession, functional job descriptions have been identified via job analysis for specific positions. Each job analysis will include physical requirements and those additional skills deemed necessary to perform to a given level of competence. For example, the National Registry has

*PARTICIPANT NOTES*

*LESSON PLAN*

4. Entrance requirements for EMS training

5. Classroom application of ADA

## *ADDITIONAL INFORMATION*

conducted a job analysis for the EMT-Basic position. The results identified reading and interpretation as an essential skill for EMT-Basic and above. Refer to Appendix B for documentation of the National Registry's Purpose of Establishment as well as the job analysis for an EMT-Paramedic, including:

- Environmental conditions
- Worker characteristics
- Physical demands
- Comments
- Skill level requirements

4. Entrance requirements for EMS training

Check with your State EMS office or the National Registry for additional functional job descriptions, accommodation policies, and the entrance requirements for specific EMS courses.

5. Classroom application of ADA

In the event a mentally or physically challenged individual is enrolled in a course, instructors must make reasonable accommodation approved by the State EMS office to assure them of the full benefit of the instruction.

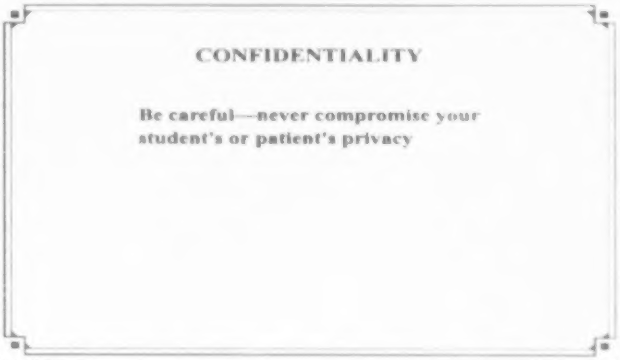
***Those accommodations made in the classroom may not be the same as those approved for certification.***

*PARTICIPANT NOTES* | *LESSON PLAN*

## V. Confidentiality

A. Employment practices

B. Classroom application



CONFIDENTIALITY

Be careful—never compromise your student's or patient's privacy

Legal Issues

*ADDITIONAL INFORMATION*

## V. Confidentiality

Existing legislation regulates and establishes criteria for the release of confidential information.

### A. Employment practices

For the EMS practitioner, work-related confidential information includes patient histories, assessment findings, and treatment rendered. Written permission, signed by the patient, is required for release, except for specific exceptions.

### B. Classroom application

In the classroom, access to education records is limited to students and when under 18 year of age, to their parents. Education records include files and other documents containing information directly related to each student, and are maintained by an institution or organization. Information such a student's name, address, telephone number, major field of study, etc. may be released if the institution gives public notice of intention to publish and the student does not object. Students and their parents *must* be allowed access. Exceptions to the restrictions can be made to school officials with legitimate educational interest, for studies in which the records are purged of personally identifying data, and by judicial order.

Instructors must be careful when using examples in class not to reveal any information that compromises a patient's privacy. This admonition also applies to information about your students. It is inappropriate, for example, to mention exam grades within the hearing of other students.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | **VI. Recourse**<br>A. Purpose<br>B. Grievance Processes<br>1. Informal<br>2. Formal |

863

*ADDITIONAL INFORMATION*

## VI. Recourse

### A. Purpose

Individuals have recourse against unfair treatment. If discrimination results in adverse circumstances for a student, such as the inability to complete a course of study, legal recourse may be appropriate. For example, if an instructor's behavior, comments, or attitude substantially interferes with learning by creating an intimidating, hostile, or offensive environment, a student could have the instructor removed from the faculty through a grievance procedure and could invoke a civil suit for damages.

### B. Grievance Processes

Grievance procedures are established processes that can be used to redress perceived wrongs, whether it involves personnel, course administration, evaluation, or other students. These can be informal or formal processes.

1. Informal process

The first step in trying to resolve a complaint through an information process is to go to the other party involved, if that would not cause undue stress or adverse repercussions (such as confronting a sexual harasser). The next step is to bring the issue to the attention of other individuals responsible for the course, in an effort to seek informal resolution.

2. Formal process

If attempts to resolve the conflict informally are unsuccessful, or if the individual chooses not to seek redress informally, it is important that a formal grievance procedure be filed. The filing should specify exactly to whom a written complaint should be directed, as well as the detailed information that should be included in the complaint. It must also specify when, and in what form, the complainant will receive a response.

Typically, a written complaint would detail (1) the event(s) and fact(s) upon which the complaint is based and (2) the issue(s) in question.

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*PARTICIPANT NOTES* | *LESSON PLAN*

## VII. Negligence

A. Context of responsibilities

1. To whom are we responsible?
   - To our students
   - To our students' patients
2. Relationships between all parties
   - Institutes
   - Clinical sites
   - Hospitals
3. Gray areas in the law
   - Law is hard to find
   - Not many cases have been decided
   - Claims are being made, but they don't always go to court
   - Law is dynamic, always changing

865

*ADDITIONAL INFORMATION*

A student may not agree with the results of an evaluation. For example, if a student fails the practical exams required by most states to practice specific EMS functions, the student can challenge exam.

## VII. Negligence

As an instructor of EMS personnel, it is your responsibility to prepare your students to face the reality of functioning within the health care field and the all of the special risks and responsibilities that entails.

### A. Context of responsibilities

1. To whom are we responsible?

   - To our students
   - To our student's patients

2. Relationships between all parties: institutes, clinical sites, hospitals, etc.

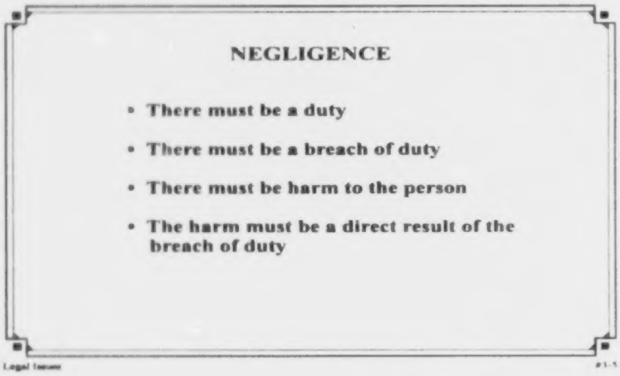
3. "Gray areas" in the law

   - Not many cases decided
   - Law is hard to find
   - Claims being made, but they don't go to court
   - Law is dynamic, always changing

*PARTICIPANT NOTES* | *LESSON PLAN*

4. Can I be sued?
   a. Examples
   b. Lawsuits against EMS personnel can and do occur
      (1) Vehicle operations
      (2) Poor patient care

B. Four elements of negligence



**NEGLIGENCE**

- There must be a duty
- There must be a breach of duty
- There must be harm to the person
- The harm must be a direct result of the breach of duty

Legal Issues #3-5

## *ADDITIONAL INFORMATION*

4. Can I be sued?

a. Examples

If a plumber's work can be found negligent, the people who have water damage can sue. People in wrecks are entitled to be fairly compensated for their loss. If a doctor, adequately trained, fails to function according to that training, e.g., cuts off the wrong leg, prescribes medicines with a serious side effect, go about an operation incorrectly, s/he can be sued.

b. Lawsuits against EMS professionals can and do occur

(1) Vehicle operations

Most common cases involve vehicle operations. Safe driving is critical. An Ohio medic was convicted for his part in a vehicle wreck and was sent to jail.

(2) Poor patient care

EMS professionals also get sued for poor patient care, just like doctors, hospitals, and nurses

**B. Four elements of negligence**

1. There must be a duty

2. There must be a breach of duty

3. There must be harm to the person

4. The harm must be a direct result of the breach of duty

C. Duty
   1. Moral vs. legal duty
   2. Due care
   3. Standard of care
      a. Differs from standard for physicians or nurses
      b. How and where standard is established for EMS providers

D. Breach of duty
   1. Gross negligence is the criteria in some states, not just mere or regular negligence. However, gross negligence remains undefined, except by juries.

## ADDITIONAL INFORMATION

### C. Duty

1. Moral vs. legal duty

Does anyone owe a duty to a blind person walking toward traffic? When does the law impose a duty on EMS personnel? Do we have to stop at every wreck? Do we have to help a person who "goes down" in a K-Mart? NO. We don't have to stop at every wreck, or help every injured person, just because we have the training. However, if and when we do get involved, then we have a duty to the patient.

2. Due care

We owe the patient the duty of due care. We must take care of the patient the same way any other reasonably proficient person of similar training would take care of the person, i.e., a doctor must care as other doctors, and so on.

3. Standard of care

a. Differs from standard for physicians and nurses

The standard of care for EMS personnel is not the same as for a doctor or a nurse. We are compared to other reasonably trained, reasonably proficient EMS care providers.

b. How and where standard is established for EMS providers

The descriptions for standard of care procedures for EMS personnel can be found in textbooks and Department of Health materials such as skill sheets. Expert witnesses, such as EMS professionals with substantial experience, can also establish what a reasonably trained, reasonably proficient EMS provider would do.

### D. Breach of duty

1. Gross negligence is required in some states, not just mere or regular negligence. However, gross negligence remains undefined, except by juries. The criteria include whether the EMS personnel's actions represented a significant departure from the standard of care.

*PARTICIPANT NOTES* | *LESSON PLAN*

    2. Duty of due care can be breached by acts or commissions
    3. Informed consent
        a. Refusal of treatment
        b. Refusal forms
E. Documentation on the job
    1. What to document
    2. Guidelines for documentation

## *ADDITIONAL INFORMATION*

2. Duty of due care can be breached by acts or omissions (failure to act).

Any investigation will attempt to find what care was given and why, as well as what care was not given and why not. Most law suits regarding patient care are brought for the failure to act when some action should have been taken.

3. Informed consent

Informed consent means that a person is given reasonable detailed information about what is going to happen and what the consequences are. For example, "I would like to start an IV. Have you ever had one before? This will hurt a little when I do it, but it will enable me to give you medications and fluids via the most direct route. All right?"

a. Refusal of treatment—if a patient refuses treatment, advise them of the worst possible consequences. They must be informed of the consequences of not accepting treatment.

b. Refusal forms—protect yourself by having them sign a refusal form, if they are able. Have it witnessed by as many witnesses as possible, and even by their family. This highlights the absolutely critical need for thorough documentation.

**E. Documentation on the job**

1. What to document

Get a patient's baseline and change of condition data. For your own protection, get trip sheets, because prehospital charts are inadequate. They only ask you to state what you did and perhaps why. They do not ask you to explain what you did not do and why. If you decide not to do something that could be considered reasonable treatment, document your reasons. The rule is, if it isn't written down, it didn't happen.

2. Guidelines for documentation

These reports should be kept forever. However, the statute of limitations is 2 years, or for minors, 2 years after their 18th birthday.

*PARTICIPANT NOTES* | *LESSON PLAN*

F. Harm

1. The person must be harmed
2. The harm must be the direct result of the breach of the standard of care

G. Measure of damages

1. Medical bills
2. Lost wages
3. Loss of life's pleasure, quality of life, and pain and suffering

H. Activity 3.1—Negligence

1. Break participants into small groups (3-4 people), and ask the groups to select a timekeeper and a reporter (preferably people who have not done so before).
2. Show overhead #3-5. Review four elements of negligence.
3. Ask participants to turn to the scenarios for Activity 3.1 in Appendix A.
4. Each group will have 20 minutes to identify level of liability *and the basis for liability*.
5. When time is up, moderate discussion on liability for each scenario.

## *ADDITIONAL INFORMATION*

### F. Harm

1. The person must be harmed

   Even if you do something, for example, drop a patient or fail to immobilize them, if your action did not harm them, they do not have an essential component of negligence.

2. The harm must be a direct result of the breach of the standard of care

   It may be difficult to sort out what injury resulted from a breach of standard and what was incurred from the injury the EMT is treating. Resolution is often obtained through expert testimony.

### G. Measure of damages

If negligence is proven, there are a variety of damages.

1. Medical bills
2. Lost wages

   For example, a 25 year old person, at $25,000 per year, for 40 years, equals 1 million.

3. Loss of life's pleasures, quality of life, pain and suffering

### H. Activity 3.1—Negligence

Refer to the scenario cards in Appendix A.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | I. Good Samaritan Law |
| | J. Why do people sue, and how can I prevent it? |
| | VIII. **Occupational Health and Safety Act of 1970 (OSHA)** |
| | A. Purpose |
| | B. Instructors should educate students regarding applicable regulations |

375

## *ADDITIONAL INFORMATION*

### I. Good Samaritan Law

Local statutes apply.

### J. Why do people sue, and how can I prevent it?

People sue because they are mad and feel that they have been poorly treated. People do, however, accept human mistakes. If you make a mistake, admit it, be humble, and apologize. Be nice to all patients. And never talk crudely or rudely about an unconscious patient. It will come back to haunt you.

## VIII. Occupational Health and Safety Act (OSHA) of 1970

### A. Purpose

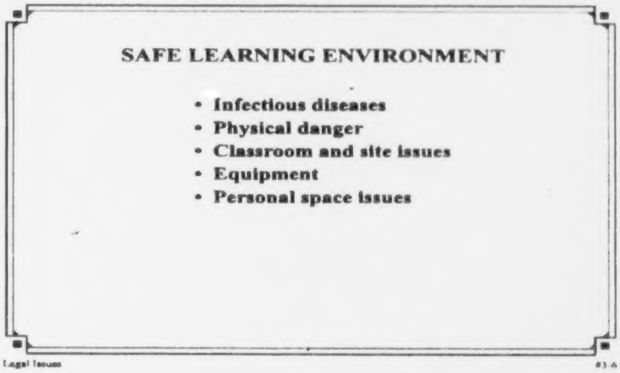
The Occupational Health and Safety Act (OSHA) of 1970 regulates employment environments and practices to ensure the health and safety of our nation's workforce. These regulations are enforceable by law and penalties will be applied for non-compliance. The law applies to employers, who must make the place of employment free of recognized hazards and comply with OSHA standards, and employees, who must comply with the standards that apply to their conduct on the job.

### B. Instructors should educate students regarding applicable regulations

EMS instructors need to make students in EMS courses aware of applicable on-the-job OSHA regulations for the courses they teach. For example, OSHA regulates procedures and practices for employee protection regarding exposure to blood-borne pathogens. Instructors teaching courses in which this is an issue should educate students during course delivery.

## IX. Negligence in the Classroom

A. Duty to provide a safe learning environment



**SAFE LEARNING ENVIRONMENT**

- **Infectious diseases**
- **Physical danger**
- **Classroom and site issues**
- **Equipment**
- **Personal space issues**

Legal Issues #3-6

877

## IX. Negligence in the Classroom

### A. Duty to provide a safe learning environment

- Infectious diseases

  Instructors have a duty to their students to take reasonable, adequate precautions to maintain an environment free of infection. This includes appropriate cleaning of CPR mannequins and protection from needle sticks, e.g. AIDs.

- Physical danger

  EMS courses involve a certain amount of risk. Instructors must take reasonable precautions to protect students from physical danger and inform them of potential risks. For example, extraction day, lifts, and carries all pose a potential threat. Instructors should make every effort to ensure that the students are physically able to complete a task as well.

- Classroom and site issues

  Instructors should attempt to safeguard students' well-being when the class location may pose a danger, e.g., snow covered stairs or a potential fall in the pole room of a fire house. An incident like this actually occurred, in which people had a scenario set up in a pole room in a fire hall. It was dark. Students were told there was a victim in the room and when they entered the room one of the students fell through the hole.

- Equipment

  Class equipment should be in good working order. Old equipment should be replaced, e.g, rescue equipment, long spine board.

- Personal space issues

  Instructors of EMS curriculum have a responsibility to instruct students in appropriate and respectful interaction with another, particularly when the situation requires physical contact that may be embarrassing to another. In the extreme, it is possible that inappropriate patient assessments could be interpreted as sexual assault or harassment.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | B. Duty to warn<br>C. Doctrine of assumption of risk<br>D. Duty to provide adequate instruction |

879

*ADDITIONAL INFORMATION*

As stated before, not only must you never talk rudely or crudely to an unconscious patient, you must never touch any patient, or speak about them, in a crude or rude manner. As students interact, it is the instructors responsibility to ensure that this standard of behavior is enforced in the classroom. Although students can be held responsible for their own behavior, an instructor will be held accountable for a failure to maintain a safe learning environment as well.

### B. Duty to warn

Where there are risks, we must warn our students and protect them. Proper warning and reasonable precautions will help in our defense, in the event of injury or disease.

### C. Doctrine of assumption of risk

- Person must be warned
- Person proceeds anyway
- Person is injured by the identified danger

In a case where it can be established that the student knowingly assumed the risk, recovery is not available under the law.

### D. Duty to provide adequate instruction

This is a gray area under the law, for the same reasons stated above: there are not many precedents, precedents are hard to find, cases are being settled out of court, and the law is dynamic and always changing. As we've discussed, juries do and will continue to decide these cases as they appear in courts of law. The question is, "Do you think there would be people on a jury that would say we had a duty to teach students according to established standards of care? Do you think that a judge might find that we had a duty?"

Here are some examples to consider:

WHAT IF WE TAUGHT ...

... students to toss I.V. needles in the garbage and someone contracted AIDs cleaning out the rig?

*PARTICIPANT NOTES* | *LESSON PLAN*

E. Duty to the students' future patients

## X. Increasing documentation and other safeguards

Use the list of questions to help define areas of needed improvement:

- How well drafted are your clinical agreements?
- Who is responsible for the student while on clinical rotation?
- Who does the student turn to if there are problems?
- Are all of these policies in writing?
- What insurance requirements do you have for the students?
- Are the program administrators insured if a student inadvertently hurts a patient?
- Are the individual instructors insured?

381

... students the wrong technique in tying off, or failed to instruct them to keep clear during a defibrillation?

### E. Duty to the student's future patients

The same question applies here as well; will juries and judges determine the instructor had a duty. In all probability, there will be claims and the courts will find a duty. Injured people are looking in all directions for someone responsible for their injuries who may be able to pay some of the astronomical hospital bills.

## X. Increasing documentation and other safeguards

Prudence demands that we do all that we can to protect ourselves, our students, and our student's future patients. Use the list of questions to help define areas of needed improvement.

*PARTICIPANT NOTES* | *LESSON PLAN*

A. Types of records

B. Communication

1. Between instructors
2. To course coordinator
3. Establish what happened

**XI. Summary**

**References**

383

## *ADDITIONAL INFORMATION*

**A. Types of records**

Identify essential records and ensure the system includes an adequate recordkeeping process.

**B. Communication**

1. Between instructors

Instructors should discuss with one another what was covered, what was omitted and why, and what seemed to give the students problems. These items should be documented.

2. To course coordinator

Individual student deficiencies should be reported—confidentially—to the course coordinator as well as the student.

3. Establish what happened

This communication and documentation establishes exactly what the course material contained and whether the student's performance was reasonable proficient for that level of training. You should have dates documented, so that in response to a charge of negligence, you can clearly state something like this, "Yes, that subject was covered on January 20, 1992. The student was instructed to perform the procedure in this manner."

## XI. Summary

The intention of this lesson is to increase awareness regarding issues with legal implications. By no means should the information contained here be construed as legal advice in a specific circumstance. Specific legal advice regarding the status of a particular incident should be obtained from private counsel.

## *ADDITIONAL INFORMATION*

### References

Westlaw Electronic Research: 1232g. Family Educational and privacy rights (access of records)

Richard A. Hernan, Jr., Attorney at Law.

Bill Meadows, Manager of Division of Educational Development, Office of EMS, Virginia Department of Health.

# THE ADULT LEARNER

## 4

Learning Theory ◄
Characteristics of Adult Learners ◄
Learning Styles ◄
Student Skills for Success ◄

## *OVERVIEW*

**Suggested instructional time for this lesson:** 2 hours

### Introduction

To maximize his or her effectiveness in the classroom, the instructor must understand the principles of adult learning and the various styles in which adults learn. The instructor's presentation must reflect, and constantly adapt to, the styles in which adults learn.

### Lesson Objectives

Through group discussion and question and answer sessions, the EMS instructor trainee should be able to:

- Define learning
- Describe the three major learning theories
- Describe four characteristics of adult learners
- Create auditory, visual, and kinesthetic learning activities
- List 5 study skills
- List 5 test-taking skills

### Materials Needed

- Overhead projector and screen
- Overhead projector markers
- Flipchart and markers
- Appendix B

### Instructional Strategies

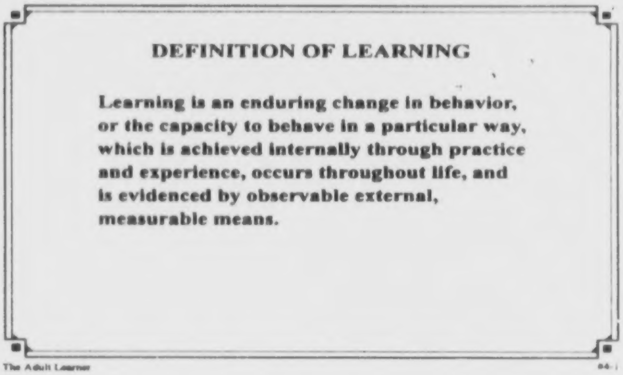
- Lecture
- Discussion
- Question and answer
- Visual aids

*PARTICIPANT NOTES* | *LESSON PLAN*

## Lesson Objectives

## I. Learning

A. Definition



**DEFINITION OF LEARNING**

**Learning is an enduring change in behavior, or the capacity to behave in a particular way, which is achieved internally through practice and experience, occurs throughout life, and is evidenced by observable external, measurable means.**

The Adult Learner 04-1

B. Conditions for learning

1. Previous experience
2. Attitude\Motivation
3. Stimulus

## *ADDITIONAL INFORMATION*

### I. Learning

### A. Definition

There are many different definitions of learning. Although these definitions do not say exactly the same thing, there are certain core elements that should be part of any definition of learning. Learning:

- is a lasting change in behavior
- results from practice or experience
- is the capacity to behave in a particular manner
- occurs throughout life
- is an internal change that is measurable externally.

### B. Conditions for learning

The degree to which behavior changes depends on several conditions. The first condition is previous experience. Are the prerequisite skills and knowledge in place so that learning can occur?

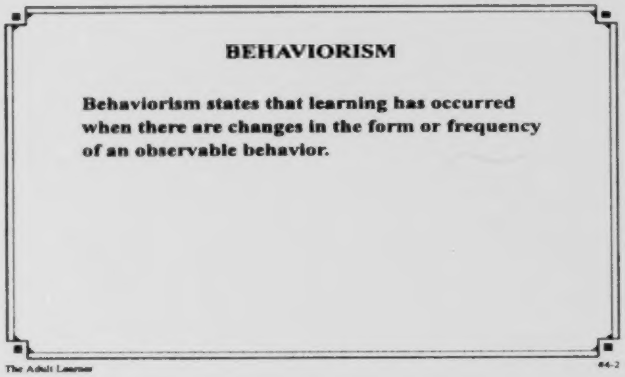
The second condition is attitude or motivation to learn. Learning will occur to the degree a person wants, or has incentive, to change his/her behavior. This is generally not a problem with educating adult learners because they choose to participate for specific reasons, e.g., job requirement, helping others, civic responsibility.

The third condition is the appropriate stimulus (instructional method) which, when applied, facilitates optimal learning. For example, imagine you are teaching CPR and the instructional strategy is lecture supported by a "how to" pamphlet, but no "hands on" experience. Your instruction probably will be less effective for first time CPR students than an instructor whose instructional approach includes practice with a mannequin. Cognitive knowledge as well as psychomotor skills are critical to the proper administration of the CPR technique. CPR training is more effective when participants are able to practice the process and procedures.

PARTICIPANT NOTES | LESSON PLAN

## II. Learning Theories

A. Behaviorism



**BEHAVIORISM**

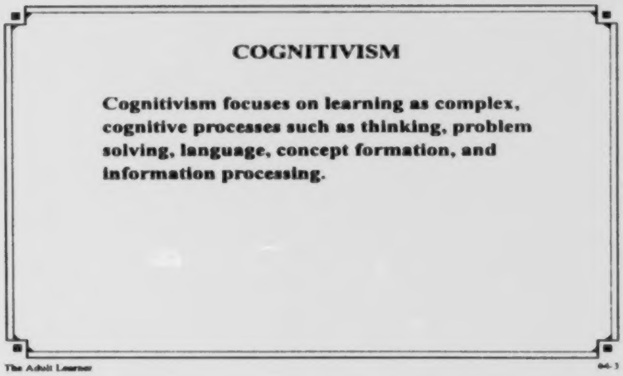
**Behaviorism states that learning has occurred when there are changes in the form or frequency of an observable behavior.**

The Adult Learner #4-2

1. How learning occurs

2. Factors influencing learning

B. Cognitivism



**COGNITIVISM**

**Cognitivism focuses on learning as complex, cognitive processes such as thinking, problem solving, language, concept formation, and information processing.**

The Adult Learner #4-3

*ADDITIONAL INFORMATION*

## II. Learning Theories

There are three major learning theories in education today: behaviorism, cognitivism, and constructivism. It is important for an instructor to have a general understanding of what these theories are, and how they relate to instruction and/or preparation for instruction. Specifically, as an EMS instructor, you will be teaching a wide range of knowledge, skills, and abilities. Knowledge of learning theories will help you to understand how and why learning occurs differently for different types of tasks and people.

Generally stated, a learning theory is an organized set of concepts, principles, and strategies that explains the process of learning and methods to facilitate learning.

### A. Behaviorism

Behaviorism states that learning has occurred when there are changes in the form or frequency of an observable behavior.

1. How learning occurs

Learning occurs when the appropriate response is performed after a specific stimulus has been applied. Behaviorism focuses on the association between the stimulus and the response, and how that connection is made, strengthened, and maintained. The classic example of behaviorism is that of the scientist Pavlov's dog. Pavlov rang a bell each time he fed his dog. After awhile, the dog would salivate (response) just from hearing the bell (stimulus). An EMS example would be the increase in heart rate and adrenalin in response to a siren.

2. Factors influencing learning

The learner, the environment (factors and conditions), and reinforcement influence how we learn. The most important of these factors is the environment, and how stimulus and reinforcement for correct performance are arranged within it.

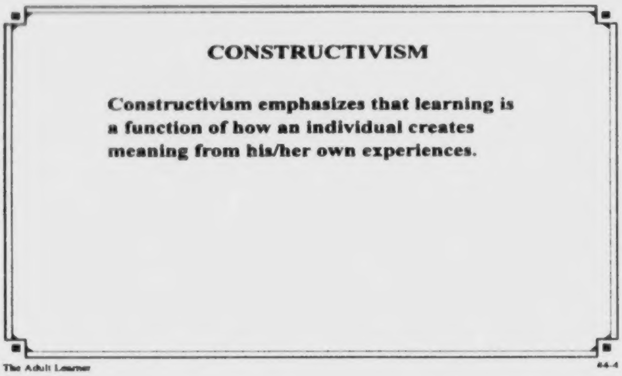
### B. Cognitivism

Cognitivism focuses on learning as complex cognitive processes such as

*PARTICIPANT NOTES* | *LESSON PLAN*

1. How learning occurs
2. Factors influencing learning

C. Constructivism



**CONSTRUCTIVISM**

**Constructivism emphasizes that learning is a function of how an individual creates meaning from his/her own experiences.**

The Adult Learner

#4-4

1. How learning occurs
2. Factors influencing learning

thinking, problem solving, language, concept formation, and information processing.

1. How learning occurs

Cognitivism focuses on the acquisition of knowledge and the internal mental processes that facilitate learning. It also stresses the importance of how information is received, organized, stored, and retrieved by the mind.

2. Factors influencing learning

Like behaviorism, cognitive theory stresses the role of the environment in learning. Explanations, demonstrations, and examples all aid in the acquisition of knowledge. For learning to take place, participants must be active in the learning process. The difference between the two theories is that cognitivists believe that learning occurs because learners are attending to and perceiving significant features of the modeled behavior; not simply stimulus → response, as in behaviorism.

**C. Constructivism**

Constructivism approaches learning and understanding from the view point that knowledge is a function of how an individual creates meaning from his/her own experiences.

1. How learning occurs

Both constructivism and cognitivism view learning primarily as a mental process; however, constructivists believe that individuals filter information from their environment and create meaning by relating the information to past experiences. For example, people can interpret information differently.

2. Factors influencing learning

The learner, the environment, and the specific interactions between these two factors influence whether learning occurs. The learner's past experience also plays a role in how he/she interprets new stimuli or situations. Like cognitivism and behaviorism, constructivism emphasizes demonstration, examples, and practice; however, constructivists believe demonstrations are critical to making the learner's experiences realistic and relevant.

*PARTICIPANT NOTES* | *LESSON PLAN*

D. Learning theories change focus

E. Activity 4.1—Realistic Learning Tasks

   1. Break into small groups.

   2. Select a reporter and a facilitator.

   3. Have fun.

## *ADDITIONAL INFORMATION*

### D. Learning theories change focus

No one theory of learning is necessarily correct. Modern approaches to learning focus on realistic learning tasks that result in improved student performance. Use the points from each of the theories that are most effective for you and your students.

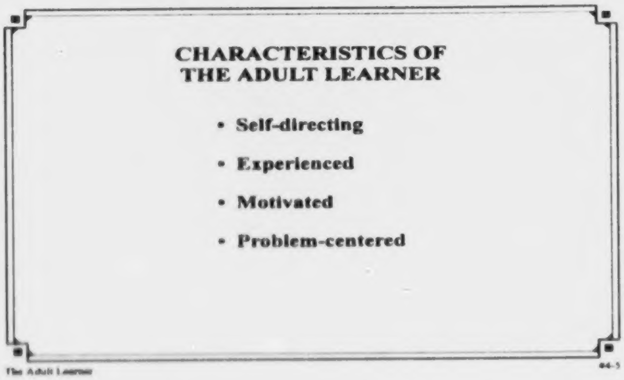
### E. Activity 4.1—The Apple Exercise

This activity demonstrates how learning and the application of learning is impacted when you move from "real" examples to relatively "unreal" or "symbolic" representations of a concept or task. This activity also demonstrates that there are kinesthetic, auditory, and visual (and even olfactory) aspects of learning. Methods of addressing each area are covered in depth later in this lesson.

*PARTICIPANT NOTES* | *LESSON PLAN*

## III. Adult Learning

A. Characteristics of the adult learner



**CHARACTERISTICS OF THE ADULT LEARNER**

- **Self-directing**
- **Experienced**
- **Motivated**
- **Problem-centered**

The Adult Learner

#4-5

1. Self-directing
2. Experienced

*ADDITIONAL INFORMATION*

## III. Adult Learning

### A. Characteristics of the adult learner

Instructing adult learners is very different from teaching children. Your role in instructing adults tends to be that of a facilitator/instructor. Unlike children, most adults enroll in classes or training with specific objectives in mind. Listed below are some characteristics of adult learners and how an instructor might deal with these character traits.

1. Self-directing

This means that learners are active in the learning process and are able to determine their own learning needs. They learn best by doing, like to be involved in planning and conducting the training (when possible), respond to a friendly, informal, adult environment, like to be informed of their progress, and can assist in the evaluation of their own progress.

As an instructor, you must be aware of learners' objectives for seeking training, be supportive, and provide feedback on their progress. Your instructional strategies should be interactive and hands-on.

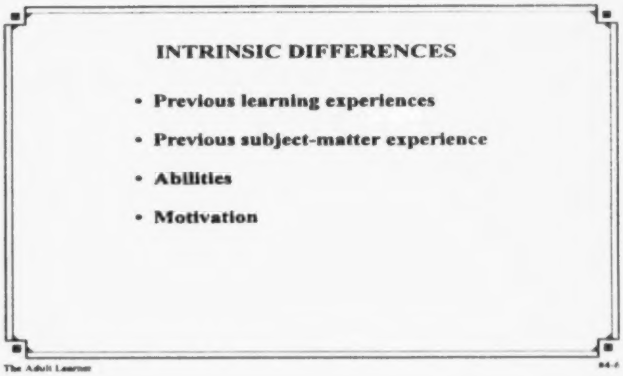
2. Experienced

The adult learner has experience and wants to share it with others. This experience is anchored in emotional frameworks consisting of values, attitudes, and tendencies.

As an instructor, you should relate new material to your learners' experiences, encourage them to share their experiences, but monitor the number of "war stories." Also, facilitate students' learning from each other, and most importantly, remember that learning may be difficult because it can require change in long-established values, attitudes, and tendencies that are based on prior experiences.

3. Ready to learn-motivated
4. Problem centered

B. Intrinsic differences



**INTRINSIC DIFFERENCES**

- Previous learning experiences
- Previous subject-matter experience
- Abilities
- Motivation

The Adult Learner

*ADDITIONAL INFORMATION*

3. Ready to learn - motivated

The adult learner is generally ready to learn (based on a need), wants to learn, will respond to a variety of instructional strategies, but may have very strong opinions or ideas on certain topics or content.

Motivation is increased when the subject matter is relevant to the immediate interests and concerns of the student.

4. Problem centered

Adults want to solve relevant, realistic problems, apply new information, and have the opportunity to discuss and solve current problems.

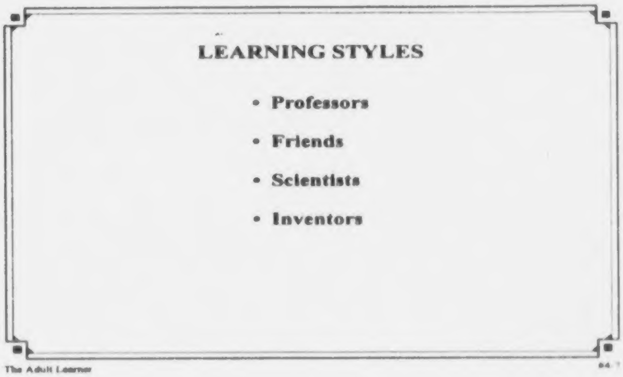
As an instructor, you should provide realistic examples and exercises, and give students the opportunity to practice. Adult students learn best by doing.

**B. Intrinsic differences**

Each student will come to the classroom with a different set of experiences, values, biases, knowledge, and skills. These differences can be attributed to the following factors:

1. Previous learning experience
    - Level (high school, college, etc.)
    - Type (vocational, military, etc.)
    - Experience (positive or negative)
    - Outcome (better job, raise, or no change)
    - Value (viewed as worthwhile or useless)
2. Previous subject matter experience
    - Related vocational field (R.N., CPR instructor, etc.)
    - Related education or training (military, biology major)

C. Learning styles



**LEARNING STYLES**

- **Professors**
- **Friends**
- **Scientists**
- **Inventors**

The Adult Learner

1. Professors
2. Friends

300

3. Abilities

- Sensory (e.g., sight, hearing)
- Cognitive (e.g., problem solving)
- Psychomotor (e.g., mechanical aptitude)

4. Motivation

- Genuine interest
- Job or promotional requirement
- Self esteem

**C. Learning styles**

In addition to intrinsic difference among learners, there are different styles of learning that as Instructors, we should be aware of. According to Garmston and Wellman there are some descriptive "personas" representative of the various learning styles.

1. Professors

The "professor's" goal is competence. This type of learner wants to master the information presented, so that he/she can recall it when necessary to perform tasks.

As an instructor, provide this type of student with facts, citations, examples, demonstrations, practice, detail, and feedback.

2. Friends

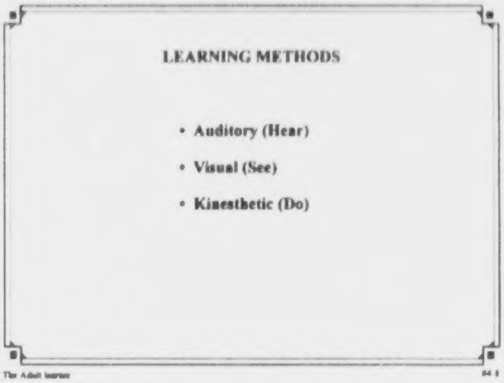
"Friends" want personal involvement and interaction with other participants. Their responses to topics are generally based on their experiences. Feelings and experiences are important to them.

As an instructor, provide group activities, real-world experiences and opportunities for students to share their experiences.

*PARTICIPANT NOTES* | *LESSON PLAN*

3. Scientists
4. Inventors

D. Learning Methods—Use Your Sense(s)



**LEARNING METHODS**

- **Auditory (Hear)**
- **Visual (See)**
- **Kinesthetic (Do)**

The Adult learner

*ADDITIONAL INFORMATION*

3. Scientists

"Scientists" will reason with the information presented to them because they want to understand and comprehend. It must make sense. They also like structure and organization.

As an instructor, make sure your presentation follows a logical, organized sequence. Also, once you give students data, ideas, and concepts, give them the opportunity to analyze processes or formulate explanation or theories. Allow them to inquire.

4. Inventors

"Inventors" are creative. They like to adapt, reorganize, and explore new ideas or ways of doing something.

Inventors can be a real challenge for an instructor, especially when there are strict processes and procedures that need to be followed, as with the EMS technical courses. However, whenever possible or appropriate, try to provide inventors with opportunities, such as individual and group exploration or creative self expression, to tap their creativity.

It is important to recognize that the learning styles described above are not absolutes. Most people are a mix of several types depending on the instructional content and instructional setting.

**D. Learning methods—Use Your Sense(s)**

Learners can also be categorized according to how they prefer to have material presented to them. The three methods are auditory, visual, and kinesthetic. Some courses provided by NHTSA, such as the EMT-Basic Course, specify student activities for each lesson that are categorized by these three primary learning styles. Each method is described below:

- Auditory (Hear). These student activities provide instructional material in a verbal manner. Those students who learn best by hearing will benefit from this method of instruction. An example of this type of student activity is: Students should hear normal and abnormal airway noises.

003

*PARTICIPANT NOTES* | *LESSON PLAN*

E. Activity 4.2—Learning Methods

1. Provide topics, or ask students to think of a topic they can teach.
2. Ask students to think of ways to instruct the topic using auditory, visual, and kinesthetic activities.

*ADDITIONAL INFORMATION*

- Visual (See). These student activities provide instructional material in a visual manner. Visual learners will benefit from this method of instruction. An example of this type of student activity is: Students should see breathing while an initial assessment is being performed.

- Kinesthetic (Do). These student activities provide instructional material in a performance manner. Those students who learn best by doing will benefit from this method of instruction. An example of this type of student activity is: Students should practice assessing breathing.

An example from the EMT-Basic Course is provided in Appendix B.

E. **Activity 4.2—Learning Methods**

1. Ask students to think of a topic they can teach (not necessarily EMS-related), e.g., water skiing.

2. Ask students to take 15 minutes and write ways to instruct the topic using auditory, visual, and kinesthetic activities.

   For example:

   *Auditory*

   - Hear changes in pitch of boat motor as skier is pulled up

   *Visual*

   - See equipment required
   - See correct posture demonstrated

   *Kinesthetic*

   - Practice putting on equipment
   - Practice correct skiing posture

3. Ask each student to read aloud his/her topic and activities to the class.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|

## IV. Learning Tools

A. Study skills

1. Note taking
2. Underlining/highlighting

906

## *ADDITIONAL INFORMATION*

## IV. Learning Tools

It will be common for you to have trainees who have not been classroom students for a while. This can be a source of anxiety for many people, but through coaching (instructor role) your students, you can build their confidence through encouragement and guidance. Explain the use of the following study aids and test taking skills.

### A. Study skills

Student materials provided with the DOT curricula will vary in quantity and level of detail. However, the following techniques can be used to improve students' study skills for any course of instruction.

1. Note taking

If students are not provided a course outline, they should follow the presentation structure, bulleting major topics and key points under those topics. If provided an outline, more extensive notes can be taken under the major topics and key points (if provided).

It is important that students DO NOT try and write down every word the instructor says. This takes their concentration away from learning the subject matter, and places it on writing notes.

As an instructor, you should be conscious of the speed of your presentation particularly when students have few supporting materials. Students will need more time to process the information presented and take notes. Deliver your material in small chunks, and make sure you allow time for questions.

2. Underlining/highlighting

When students are assigned outside reading or are following a presentation that has supporting materials, underlining or highlighting is a very useful learning tool. Students can indicate quickly what topics or points are important with little disruption of their cognitive processing of the presentation.

Highlighting important information in videos can be accomplished by mentally picturing yourself performing the skills and drawing the critical elements.

*PARTICIPANT NOTES*

*LESSON PLAN*

3. Outlining
4. Summarizing
5. Recording devices

## *ADDITIONAL INFORMATION*

As an instructor, help your students by noting important topics or key points. Your students are there to learn. It should not be their job to figure out what you feel is important.

3. Outlining

If student materials are not provided, a helpful technique is for students to review the notes they took in class, then develop an outline. This requires students to go over the presentation in their minds, then arrange it in a logical order. This process helps students identify areas of misunderstanding or particular importance.

4. Summarizing

Whether student materials are provided or not, it is always a good idea for students to summarize a presentation or lecture. Again, this requires students to reflect upon the presentation, review their notes, then describe what they have learned in their own words. Written summaries, as well as verbally discussing the material or reading aloud the information you want to remember are all effective summarizing techniques.

As part of the summarizing process, both instructors and students should tie in new information with what has already been learned. This provides mental "hooks" on which information can become more firmly attached.

5. Recording devices

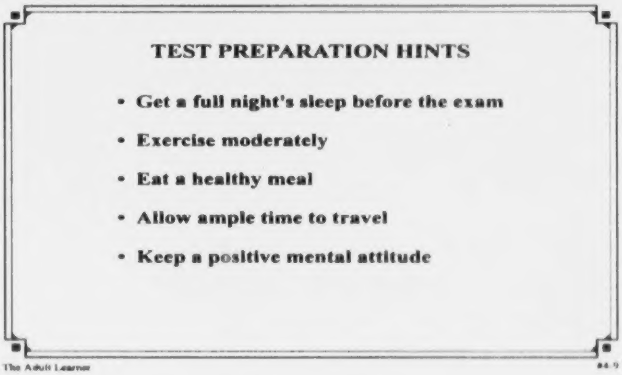
Students may request to record your classes/lectures. This is common practice on college campuses, but an instructor must give his/her consent to the taping.

For students who need to pay close attention to lectures, but also need to take detailed notes, recording lectures is an excellent option. He/she can become an active participant in the lecture, then re-listen to the lecture for the purpose of taking notes. Another advantage is being able to listen to the tape while traveling. If a student has a long commute and little time to study, listening to lectures can be a way to make the time more productive.

PARTICIPANT NOTES | LESSON PLAN

6. Study environment

B. Test taking skills



**TEST PREPARATION HINTS**

- Get a full night's sleep before the exam
- Exercise moderately
- Eat a healthy meal
- Allow ample time to travel
- Keep a positive mental attitude

The Adult Learner

#4-9

## *ADDITIONAL INFORMATION*

As an instructor, you must decide if you will allow students to tape your classes. In general, it is not a problem. However, be aware that you can be held liable for what is on the tapes. Additionally, if you feel taping will change how you deliver your course, or make you feel uncomfortable, you may want to choose not to allow it.

6. Study environment

The best studying is accomplished in a comfortable place, free of external distractions. It is best to set up a regular study schedule, preferably at the same time each day for a specific period of time. Studying with another student who is doing well in the class is recommended. Study for short periods of time with frequent rest breaks. Short, frequent study periods are preferable to marathon sessions. Last-minute studying is not recommended!

### B. Test taking skills

Adults, just like children, are subject to test anxiety. Ensuring the best possible test scores is the responsibility of both the students and the instructor. The instructor should not make tests a "taboo" subject. Inform students how they will be evaluated, when evaluation will occur, and what content the evaluation will cover. The subject matter on a test should not be a secret. If an instructor has not addressed evaluation, students should raise the question. The second part of the equation is that students are responsible for their knowledge of the subject matter. Memorization techniques (mnemonics, mental imagery, self-recitation, relating, etc.), simulated practice, and study groups are all techniques that can improve evaluation scores.

Other test preparation hints are as follows:

- Get a full night's sleep before the exam. Your body needs to be rested for your brain to function at peak capacity.
- Exercise moderately prior to the test. The activity will increase your cardiovascular status, thus increasing the blood supply to your brain.
- Eat a healthy meal. Do not eat a heavy meal within one hour of the exam.

## V. Summary

## References

*ADDITIONAL INFORMATION*

- Allow ample time to travel to the testing location. When you have arrived, take a moment to collect yourself by taking several slow, deep breaths through your nose and slowly let them out. Try to relax all of your muscles.

- Keep a positive mental attitude toward yourself. Close your eyes and say to yourself, "I know the material. I will do well on the test." Never say to yourself. "I don't know the answer." Your brain's capacity to search and retrieve information can be clocked by negative thoughts.

## V. Summary

Learning is a lasting change in behavior. Different learning theories propose different explanations for how and why learning occurs. Instructors need to be aware of the various characteristics and learning styles of adult learners in order to design effective instruction. It is also incumbent upon instructors to provide their students with tips on learning tools that help facilitate their study and test-taking skills.

## References

Berliner, D.C., & Gage, H.G. (1991). Educational Psychology (5th ed.). Boston: Houghton Mifflin Co.

Dubs, S. Gail, (1993). Emergency Medical Services Study Guide. Harrisburg, PA: Pennsylvania Department of Health, Division of Emergency Medical Services.

EMT-Basic: National Standard Curriculum, 1994.

Garmston, Robert J., and Wellman, Bruce (1992). How to Make Presentations that Teach and Transform. Alexandria, Virginia: Association of Supervision and Curriculum Development.

Head, Janet, (1990). The Instructor Resource Manual. R.J Brady & Co.

Heinich, R., Molendo, M., Russell, J.D. (1993). Instructional Media and the New Technologies of Instruction. New York: Macmillan Publishing.

# CREATING AN EFFECTIVE LEARNING ENVIRONMENT

## 5

- Assess Your Audience ◂
- Assess the Physical Environment ◂
- Room Setup ◂
- Classroom Management ◂

## CREATING AN EFFECTIVE EDUCATIONAL ENVIRONMENT

### *OVERVIEW*

**Suggested instructional time for this lesson:** 1 hour

### Introduction

This lesson explains the purpose of gathering information about students and offers suggestions about the type of information that, once acquired, can contribute to the success of a course. Guidance is given about how to adjust instruction to meet the needs of each unique group of students. The importance of the learning environment, its characteristics, and how to create an atmosphere that supports a rewarding educational experience are discussed.

### Lesson Objectives

Through group discussion and question and answer sessions, the EMS instructor trainee will be able to:

- Describe three information-gathering techniques used to assess an audience
- Specify three individual or group attributes that affect learning
- Describe an adaptive strategy for dealing effectively with three individual or group attributes
- Identify two potential obstacles to learning
- Cite methods to overcome two potential obstacles to learning
- List five characteristics of an ideal learning environment
- Describe seating arrangements that promote interaction
- Name three factors that contribute to a stimulating atmosphere

### Materials Needed

- Overhead projector and screen
- Flipchart and markers

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### Instructional Strategies

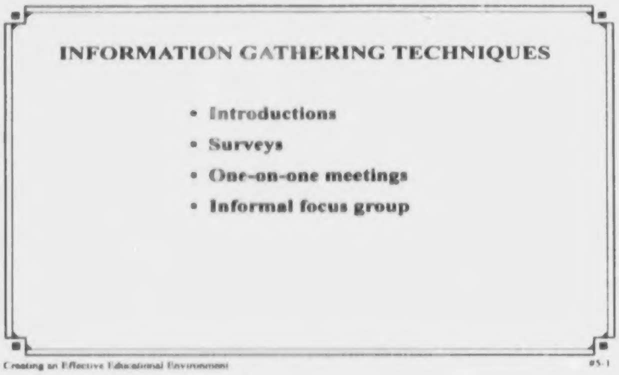
- Lecture
- Discussion
- Question and answer
- Visual aids
- Activity

*PARTICIPANT NOTES* | *LESSON PLAN*

## Lesson Objectives

## I. Assess Your Audience

A. Information-gathering techniques



**INFORMATION GATHERING TECHNIQUES**

- **Introductions**
- **Surveys**
- **One-on-one meetings**
- **Informal focus group**

Creating an Effective Educational Environment

#5-1

1. Using introductions effectively

## *ADDITIONAL INFORMATION*

## I. Assess your audience

For many reasons, it is necessary to know "who is in the room." Audience characteristics are a principal concern in the design, development, delivery, and evaluation of any educational experience. As courses are conceived, the audience is postulated in a general sense and the material is planned accordingly. During the first session of class, the premise gives way to reality, and the adept instructor will adjust his/her strategies and methods as the situation demands.

### A. Information-gathering techniques

1. Using introductions effectively

Think back to the first lesson of this Instructor Training Program. Remember the introductions? Valuable information can be shared during those first few minutes of class. Handled effectively, an easygoing question and answer session can help you to find out the particulars of an audience quickly, while at the same time you demonstrate interest in your students as individuals—an essential step in establishing rapport. The information you gather can be used to adjust the instruction, thus enabling you to better meet the needs at hand.

Here are some questions to ask:

- Have you ever taught before? What courses?
- How long have you been involved in delivering emergency medical services?
- What is your specialty? Are you full-time EMS or a part-time volunteer?
- Is this a required course or an elective?
- Are there any particular skills you hope to improve?
- Are you excited about being here?
- Why? What do you hope to gain by attending this training?

*PARTICIPANT NOTES*

*LESSON PLAN*

2. Icebreakers
3. Surveys
4. One-on-one meetings
5. Focus groups

*ADDITIONAL INFORMATION*

2. Icebreakers

- Hand out a sheet of paper with 20 "one-liners" on it describing hobbies, activities, places visited, and other experiences. Have students go around and get signatures of people who have had the experience.

- Distribute matching "items" and have students find their match, e.g., puzzle pieces, numbers, etc. One variation is to have everyone put one shoe in a large bag and then take someone else's shoe out. When they meet their match, they ask questions and then introduce the person to the rest of the class.

3. Surveys

One way to get honest information from your participants is to conduct an anonymous survey. If you have the opportunity, try and get the answers to some pertinent questions ahead of time. This will allow you to prepare for any special needs in advance. If you cannot survey for the information ahead of time, make the survey one of the first exercises in the course; then adjust as necessary.

4. One-on-one meetings

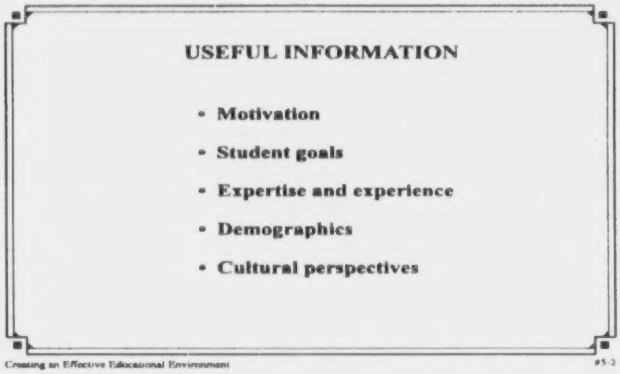
Sometimes a student will approach you one-on-one about a question or concern s/he was reluctant to bring up in class. For example, if a student needs special arrangements for a makeup exam, s/he will often use "office hours" to make the request. Sometimes students will simply catch you in the hallway. Determine before the course starts if and when you will be available outside of class and communicate this to the students on the first day. Use these one-on-one meetings to get to know your students and to obtain feedback about the class.

5. Focus groups

A focus group is just that, a group with a focus. Focus groups can be information-gathering or problem-solving. A survey can be used prior to the meeting; discussion can then center around the survey results. The instructor of a new curriculum might conduct an informal focus group during the first session of class with the goal of customizing the presentation before the next session.

*PARTICIPANT NOTES* | *LESSON PLAN*

B. Useful information and adaptive strategies



**USEFUL INFORMATION**

- **Motivation**
- **Student goals**
- **Expertise and experience**
- **Demographics**
- **Cultural perspectives**

Creating an Effective Educational Environment

#5-2

1. Understanding motivation

2. Balancing student goals with course objectives

## B. Useful information and adaptive strategies

### 1. Understanding motivation

As discussed in Lesson 1, the Introduction, student motivation is an important component of successful training. You were urged to find out whether the training is mandatory or voluntary and if students are excited to be in class. If you have a highly motivated group, you may go through the course faster than anticipated. If this occurs, restructure lessons and increase the depth planned for the most relevant topics, and/or include more exercises, activities, and practice. Some learners have a voracious appetite for knowledge and skills and an adaptive strategy will help you to challenge them.

If a group is unmotivated, find out why. Address the issues whenever possible, Enlist the students' support in making the course more fun and interesting. Control is important to adult learners. If you can persuade them that they influence what occurs, they may work with you instead of against you to create a more productive learning experience.

There are often incentives that motivate students to attend training and it is good to know what they are. Perhaps the course is necessary for professional advancement. You may have students who attend because the class counts for continuing education credits and they are obligated to complete a certain number of hours. Students may attend because they are simply interested in the subject matter. As you seek to involve and interest your students, it helps to understand what is motivating each of them.

### 2. Balancing student goals with course objectives

Differences may exist not only in basic enthusiasm, but in students' focus, interest, and how much value they perceive in various topics. Many times adult learners have years of experience and want in-depth knowledge on the subjects that interest them. They may want to concentrate on a particular skill or an area that directly relates to their job requirements. As the instructor, you have to measure individual interests against the lesson plan, try to meet the needs of your students, and still present the entire curriculum.

3. The significance of expertise

4. Using demographic information

*ADDITIONAL INFORMATION*

For example, in the Instructor Training Program, literally hours could be spent on the learning theory that underlies "practical" teaching methodologies. Typically, the adult learner is interested in real-life application, and so the focus of this course is on skill development. However, there may be those in the room who are fascinated by the theoretical underpinnings of education. These individuals see theory as the substance behind the application; others want to "stop talking about it and just do it!" Instructors need to be able to balance the objectives of the course with divergent participant interests. When in doubt, look to the course and lesson objectives for guidance.

3. The significance of expertise

Additionally, the depth and breadth of experience represented by each student in each classroom is significant. Levels and types of experience vary from course to course and, as an instructor, you must be ready, willing, and able to adjust accordingly. How much experience have they had? Is there a wide range in the degree and variety of expertise represented, or is the group fairly homogeneous?

Most groups are not homogeneous. Therefore, in a typical classroom, you will have to "teach to the middle." Some tips on remediation and enhancements that target the students at either end of the spectrum are included in Lesson 7, Evaluation and Lesson 8, Instructional Strategies and Methods. It is important to evaluate student progress at regular intervals, throughout the course. Frequent assessments allow an instructor to address problem areas before it is too late for adaptive strategies.

4. Using demographic information

Demographic data includes details such as age, educational level, EMS experience, and place of residence for each student. This information will help you tailor your presentation; for example, through the use of age-appropriate anecdotes. Students will appreciate it if you incorporate location-specific practices/regulations or details unique to the branch of EMS service represented. This is because adult learners have a strong desire to learn material that is particularly relevant to them, not just information in general.

Demographic information should, on an individual basis, be anonymous. If you want to report your findings to the group, do so as class averages. The course administrator may want to keep a record of demographic data.

*PARTICIPANT NOTES*

*LESSON PLAN*

5. Appreciating cultural issues

C. Identify and overcome potential obstacles to learning

1. Learning disabilities

*ADDITIONAL INFORMATION*

5. Appreciating cultural issues

Recognize that the ways in which individuals interact in a learning environment can be influenced by unique cultural characteristics. For example, certain cultures place a high value on consensus-building. It may be difficult for an individual who has adopted problem-solving strategies consistent with a consensus-building approach to argue his/her position effectively in a group that sees compromise as backing down, or even losing. As an instructor, you are obliged to evaluate each student on achievement, regardless of personal style. Furthermore, appreciation of diversity issues will help you to create an educational environment that is flexible, creative, and receptive to the needs of all students.

**C. Identify and overcome potential obstacles to learning**

1. Learning disabilities

A learning disability typically refers to any condition that interferes with an individual's ability to absorb, process, and apply information. An "attention deficit disorder," for example, is a condition in which concentration is impaired. Dyslexia is a physical condition which presents impediments to processing the written word. Below average reading ability is another obstacle to learning, as is a deficit in study skills. Obviously, these must be dealt with effectively for the student to derive maximum benefit from a course of study.

Learning disabilities should be handled on an individual and confidential basis. You should encourage all students who have special needs to speak with you privately. If you suspect a problem, approach the student yourself. Although these conditions are being identified more reliably, many adults may have never recognized their "symptoms" as something which, with appropriate interventions, can be overcome. Explore solutions with the student to make his/her training an effective and rewarding learning experience.

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2. Physical limitations
3. State and institutional policies
4. Local resources

*ADDITIONAL INFORMATION*

2. Physical limitations

Physical limitations are as important to identify as learning disabilities because they too can affect learning. Adjustments to your instructional presentation may be required for hearing- or visually-impaired students and wheelchair-bound participants.

For example, a hearing-impaired student may require an interpreter. However, a seat at the front of the class to facilitate lip-reading might be sufficient or even preferable. When options are available, select an intervention that the student feels comfortable with, and if lip-reading is the preferred solution, remember to maintain an unobstructed view for the student as you lecture.

A visually-impaired student may require a front row seat as well, so that instructional aids such as graphics and overheads can be seen clearly. As per the design principles discussed in Lesson 9, Media, make sure that your visual aids are legible. It may also be helpful to provide printed copies of your overhead transparencies.

3. State and institutional policies

Contact your state EMS office to determine what, if any, accommodations are required and/or appropriate. Disability requirements will differ for educational institutions; check with site administrators for their guidelines. Appendix B includes the accommodation policy adopted by the National Registry.

4. Local resources

Familiarize yourself with locally available resources, because there may be times when you will need to refer a student to other sources of assistance.

You are not expected to be all things to all people. If a student is experiencing serious personal problems that interfere with successful course completion, it is probably in his/her best interest to address those problems with a trained professional or personal friend rather than with you. That frees you up to make reasonable adjustments to help them complete course requirements; this is your responsibility as their instructor and should be the focus of your support strategy.

D. Your "Game Plan"--a review of adjustment strategies

- Restructure lessons by increasing the depth of the most relevant topics
- Add exercises, activities, and practice
- Enlist the support and commitment of students to help create a learning experience that meets their needs
- Give examples of how their participation and feedback can help you to make the material more relevant and useful to them
- Meet individual needs, if possible; e.g. letter of recommendation, certification, critical skill development
- Teach to the middle, but employ remediation and enhancement strategies
- Be aware; appreciate cultural differences
- Use informal evaluation tools to measure comprehension, competence
- Assess frequently, before beginning new material

*ADDITIONAL INFORMATION*

## D. Your "Game Plan"—a review of adjustment strategies

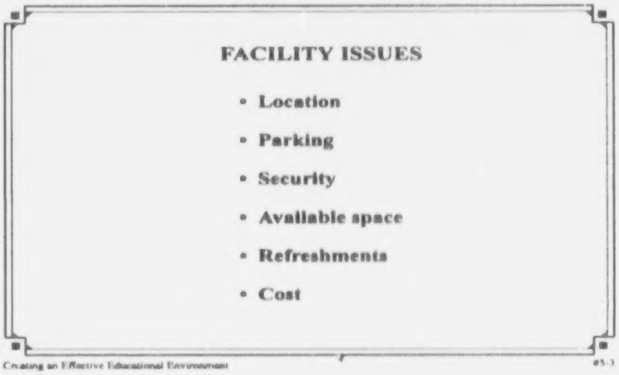
Now that you've gathered all this data, how do you move forward with an instructional "game plan" that will be effective? Teaching is a lot like coaching a ball team. If you're out there on the field, and the defense seems impenetrable, you may have to beef up your offensive strategy. On the other hand, if your team is flying high, with victory in the air, how do you keep them focused enough to win once more? Adjustment strategies should be considered and incorporated on a case-by-case basis, depending on the needs of the students.

*PARTICIPANT NOTES* | *LESSON PLAN*

## II. Assess the Physical Environment

A. Features to consider

1. Facility issues

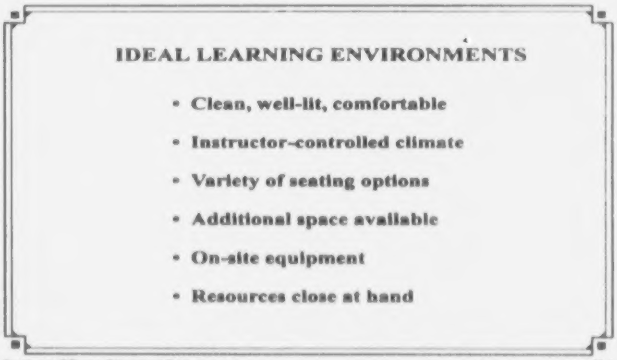


**FACILITY ISSUES**

- Location
- Parking
- Security
- Available space
- Refreshments
- Cost

Creating an Effective Educational Environment #5-3

2. Classroom characteristics



**IDEAL LEARNING ENVIRONMENTS**

- Clean, well-lit, comfortable
- Instructor-controlled climate
- Variety of seating options
- Additional space available
- On-site equipment
- Resources close at hand

Creating an Effective Educational Environment #5-4

*ADDITIONAL INFORMATION*

## II. Assess the Physical Environment

During training, it is important that students feel comfortable and are free of distractions. It may be your responsibility as an instructor to research available facilities and select the appropriate one for your course needs. Listed below are some characteristics of an ideal learning environment. Take these into consideration when you are securing a facility.

### A. Features to consider

1. Facility issues

- Location
- Parking
- Security
- Available space
- Restrooms
- Refreshments
- Cost

Determine what each facility provides for the convenience and comfort of students and instructors. Be aware that the class schedule impacts criteria importance, e.g., outdoor lighting and security may be essential for student safety during night classes, while day classes require readily available food service. You might also consider that parking needs are affected by class size, and that your student population will probably be happiest with a local facility or a trip to a coveted location.

2. Classroom characteristics

Creating an effective learning environment requires attention to those aspects of the training site that affect how comfortable students are in the classroom. When students are at ease they are better able to concentrate and learning is facilitated.

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## CREATING AN EFFECTIVE EDUCATIONAL ENVIRONMENT

*PARTICIPANT NOTES* | *LESSON PLAN*

3. Course-specific criteria
    a. Break-out rooms
    b. Special requirements

*ADDITIONAL INFORMATION*

Consider some of the characteristics of an ideal learning environment:

- Clean
- Well lit
- Climate control; i.e., the ability to adjust temperature
- Classroom size is appropriate for the number of students and course requirements
- Seating can be arranged to suit the needs of each lesson
- Additional space is available to store equipment and supplies, or as an extra room for small group work

In addition to basic environmental conditions, consider the following:

- Equipment availability on site
- Organization and layout, i.e., resources close at hand and easily utilized
- Potential distractions, e.g., cheerleading camp directly outside the window

3. Course-specific criteria

a. Break-out rooms

When a course includes large numbers of students and the lesson plan calls for a highly interactive instructional strategy, it is often beneficial to have designated space available for small group work. Sometimes called breakout rooms, these areas provide privacy during group interaction. This is particularly useful if the group will be presenting to the entire class later on and an element of surprise is desirable, or if the class size makes it difficult to concentrate in one large room.

b. Special requirements; e.g. practical skills courses, such as ambulance instruction

Be aware of any special equipment or site requirements. For example, if you are teaching the Emergency Vehicle Operators Course (EVOC), you will need outdoor space adequate for ambulance instruction in addition to classroom space.

# CREATING AN EFFECTIVE EDUCATIONAL ENVIRONMENT

*PARTICIPANT NOTES*

*LESSON PLAN*

B. Facility arrangements

  1. Find the right training facility
  2. Visit the site
  3. Check out supplies and equipment

## B. Facility arrangements

1. Find the right training facility

As the instructor, it may be your responsibility to research available facilities and select the appropriate one for your course needs. Use the criteria listed above to assess the advantages and disadvantages of each site. Determine essential vs. non-essential elements and eliminate potential sites that lack key criteria. Then, weigh the advantages of each to decide upon the right training facility for your particular course.

2. Visit the site

Once you have a training site secured, visit the room. Based on the room and your instructional strategies, develop a plan on how to best utilize the space. Determine workable seating options that allow space for all of the instructional methods you will employ, such as lecture, small groups, and practical exercises.

3. Check out supplies and equipment

Note the equipment requirements for each lesson and confirm what the site has available and what must be planned for and provided by the instructional staff or course administrator. Arrange for the equipment well in advance of the training. Identify in advance who is responsible for helping you to set up equipment or replace faulty equipment. Have a supply of extra parts that may need to be replaced; e.g., light bulbs for the overhead projector.

Prepare overhead transparencies and handouts as you complete your lesson plan. Proofread carefully; participants will notice errors and be distracted by them. Make sure that you have all supporting materials duplicated as far in advance as possible, to allow time for unexpected delays or last-minute corrections. For more information about media and equipment management, see Lesson 9, Design and Use of Media.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
|  | 4. Plan for known distractions<br>5. Scheduling |

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*ADDITIONAL INFORMATION*

4. Plan for known distractions

Distractions come in all shapes and sizes, and are created by people, places, and things. The concentration of students can be affected by poor lighting, a lawn mower outside, a disruptive student, uncomfortable temperatures, rattling air conditioning units, loud fans, street noise, etc.

Deal with known distractions before class begins. For example, if the lights flicker, make sure the facility takes care of the problem right away. While it is impossible to identify all potential distractions, a quick site survey may prevent a difficult situation when class begins.

If a disturbance occurs during class, assess its significance. Though minor distractions should be ignored, if something interferes with student concentration, the training suffers. In those cases, consider options to resolve the situation, either by yourself or as a class. When the class participates in the solution, they are likely to be satisfied with the outcome. Don't let unforeseen events determine learning outcomes. Keep the course goals and lesson objectives in mind and find creative ways make the instruction accomplish those objectives regardless of disruptions.

5. Scheduling

As you develop your agenda for the training session, plan for regular breaks. Adults need frequent breaks to take care of physical needs (restrooms, coffee, soft drinks, smoking, stretching), to stay alert mentally, and to take care of other responsibilities. Scheduling breaks every 50 minutes is ideal, and sessions should never go longer than 75 minutes without a break. Scheduling breaks and listing them in your agenda gives students a sense of structure and control. Of course, once a break is listed in the course schedule, participants will hold you to it. If necessary, bring them into the decision-making process and reach consensus on a change in schedule.

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| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | **III. Room Setup** |

## III. Room Setup

A. Factors to consider

1. Lesson objectives and types of activities
2. Space available
3. Group size

033

*ADDITIONAL INFORMATION*

## III. Room Setup

Adults tend to have more physical discomfort in the classroom; for example, difficulty seeing and hearing or discomfort sitting in one place for a long time. It may have been a long time since adult students completed their formal education and some may find it hard to adjust to the constraints of the classroom.

Room setup is just as important as other aspects of lesson preparation. Trainees will take their cue from the setting they encounter and their motivation to learn will be affected accordingly. Orderly and careful preparation will maximize comfort and minimize distractions.

### A. Factors to consider

Consider the following factors as you determine the best seating configuration for the classroom:

1. Lesson objectives and types of activities

Ask yourself what is required and what seating arrangements will best facilitate goal accomplishment. Must students perform actions and/or demonstrate understanding; i.e. performance- or knowledge-based objectives? What are the space requirements for a given practical exam or activity? Will students need a lot of group interaction, or is there a great deal of individual analysis that is best done without distractions? If the circumstances change from lesson to lesson, can you alter the seating easily?

2. Space available

Ideally, the instructor would decide what the best classroom set up is for each lesson based on the answers to the preceding questions, and that would determine the classroom obtained. However, instructors will most often have to choose among available rooms. Reality demands adaptation as well.

3. Group size

Some room setups accommodate large groups more easily. The number of students will also impact the number of small groups or pairs, if needed. If group work is part of your instructional strategy, plan accordingly.

939

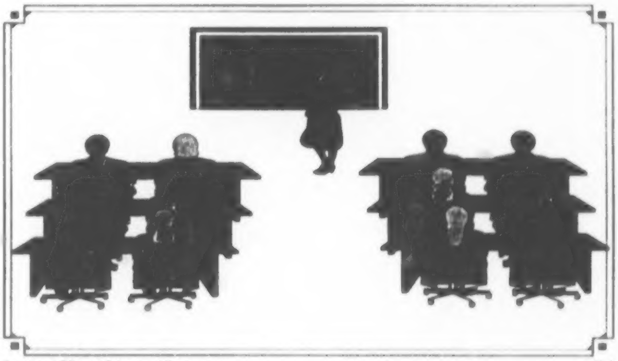
*PARTICIPANT NOTES* | *LESSON PLAN*

4. Media

5. Need for instructor control vs. participant interaction

B. Seating options

1. Classroom



Creating an Effective Educational Environment #5-5

*ADDITIONAL INFORMATION*

4. Media

Seating must allow every student an unobstructed view of any visual aids used during instruction.

5. Need for instructor control vs. participant interaction

Certain configurations encourage interaction more than others. If maintaining attention becomes an issue, adjust accordingly.

**B. Seating options**

1. Classroom

Advantages

- Maximizes instructor control
- Fair instructor mobility (with aisles at center and sides)
- Good ability to see visual aids in the front of the room
- Maximizes space

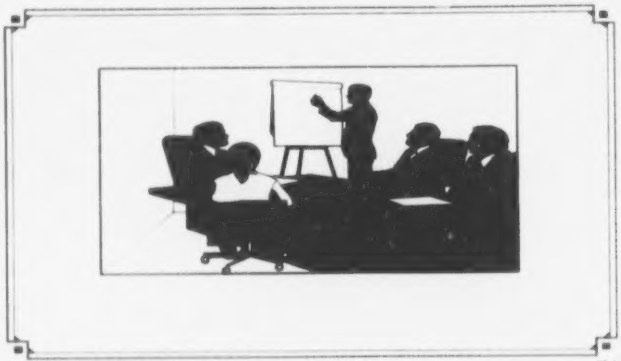
Disadvantages

- May lose people in the back of the room
- Discourages participation
- Reduces interaction among participants

PARTICIPANT NOTES

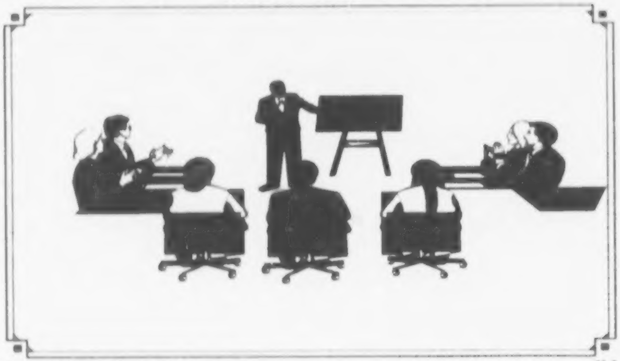
LESSON PLAN

2. Boardroom



Creating an Effective Educational Environment #5-6

3. Semi-circle, U-shape



Creating an Effective Educational Environment #5-7

2. Boardroom

This arrangement works well for small groups of experienced trainees who know one another.

Advantages

- Encourages interaction among participants
- Encourages participation
- Maximizes writing space for participants
- Excellent for team work in small or break-out groups

Disadvantages

- Poor instructor mobility
- Some participants may have difficulty seeing visuals
- Some participants may have difficulty seeing instructor
- Uses more space per person
- Not suitable for large groups

3. Semi-Circle, U-Shape

Good for hands-on work where the instructor will check on progress.

Advantages

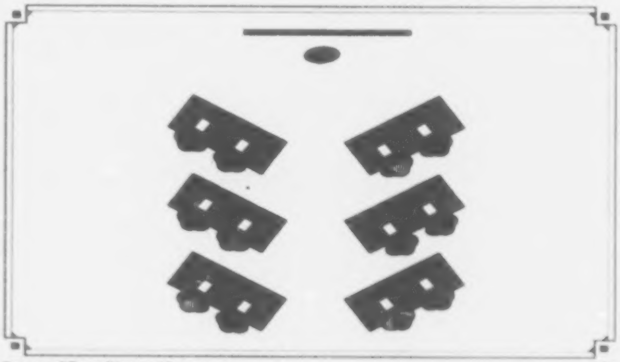
- Excellent instructor mobility
- Encourages interaction among participants
- Encourages participation

Disadvantages

- People near the front may have to turn to see visuals
- Uses more space per person
- May not work for large groups

*PARTICIPANT NOTES* | *LESSON PLAN*

4. Chevron



Creating an Effective Educational Environment

C. Activity 5.1—Room Setup

  1. Form small groups
  2. Given group characteristics and typical learning events, come to consensus on the ideal seating arrangement(s)
  3. Present your conclusions to the class

D. Logistics involved in room setup

  1. Team teaching
  2. Time

*ADDITIONAL INFORMATION*

4. Chevron

Advantages

- Excellent instructor mobility
- Excellent interaction among dyads or quads
- Encourages participation
- Provides writing space for participants
- Good ability to see visual aids
- Works well even with large groups

Disadvantages

- Poor for whole-group interaction

## C. Activity 5.1—Room Setup

Divide the class into small groups. Six scenario cards have been provided for this activity, each with two scenarios depicting different learning objectives, types of activities, and class size. Refer to Appendix A, Activity 5.1.

Students should discuss optional seating arrangements, list the advantages and disadvantages of each one, and come to consensus on the arrangement best suited to the characteristics of each example. Each group should share their results with the entire class.

## D. Logistics involved in room setup

1. Team teaching

In some team teaching situations, instructors split lessons between them. This requires communication. Instructors should talk to one another about the requirements of each lesson and plan ahead for changes in the room setup.

2. Time

Be sure to allow time in the course schedule for the logistics of rearranging the classroom. You can ask the students to help you, but this is inherently disruptive and you will lose some time. It is also a good idea to explain to students why any changes are being made.

047

*PARTICIPANT NOTES* | *LESSON PLAN*

## IV. Classroom Management

A. Preparation

1. Checklist(s)
2. Helpful hints

B. Establish ground rules

046

*ADDITIONAL INFORMATION*

## IV. Classroom Management

### A. Preparation

1. Checklist(s)

Checklists are valuable organizational tools. Encourage students to prepare one prior to teaching a course and before each lesson. Depending upon the course materials, equipment/supply requirements may be indicated in an overview section at the beginning of the lesson. This list should be added to with more specific notes as necessary. Refer students to the sample pre-class checklist that has been included in Appendix B.

2. Helpful hints

- Flipcharts that can be done ahead of time will save you time in the classroom. Roll the prepared sheets and secure them with a rubber band until you get to the training room.
- Match each overhead to the lesson plan outline.

  Make sure that you have a transparency in good condition for each one noted in the lesson plan. Clear plastic covers, three-hole punched, are a great way to organize overheads and protect them. Simply arrange them sequentially by lesson in an open binder on the lectern.
- Arrive early

  Get to the training room at least 45 minutes before your session begins. This gives you time to skim through your lesson plans, run through your pre-class checklist, and solve any problems you find. Additionally, you will be able to greet the participants individually as they come in, which will help them (and you) to feel more comfortable.

### B. Establish ground rules

Ground rules specify the norms (or "shoulds") for a session. An instructor may describe the ground rules for a session and post them, asking for any additions that the group believes would enhance performance.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | C. Encourage an interactive, participatory learning environment<br>1. Set the tone<br>2. Practice active listening |

On the other hand, the instructor may begin with a blank slate and solicit group input on ground rules that would make the group work at its best. Either way, ground rules provide trainees with a structure from which to develop expectations. Ground rules make acceptable behavior clear up front and even help to generate desired behavior. These rules are a valuable tool to use when addressing inappropriate behavior.

### C. Encourage an interactive, participatory learning environment

The ideal adult learning environment also includes less tangible elements. Because adults have often had many valuable experiences that are relevant to the course material, they will achieve the most when they have opportunities to direct their own learning. As we've said, adult instruction must be participatory to be effective. At the same time, instruction needs to be structured in order to achieve its objectives.

1. Set the tone

Adults are self-motivated unless the environment threatens their self-esteem. Many adults are uncomfortable with the possibility of venturing a "wrong" answer or a "stupid" question, and may even be uncomfortable with being in a teacher/student hierarchy. In teaching adults, it is essential to set the tone of a session immediately. Participants will be absorbing your verbal and non-verbal cues to assess your perceptions of them and the risks of participating. Make it clear that you think of yourself as someone who is facilitating learning among adults who already have a broad range of skills and experience.

2. Practice active listening

Active listening is an important part of creating an interactive environment. It involves carefully listening to what a participant is trying to communicate and then reflecting back your understanding of what was said. Avoid simply parroting back answers that trainees give. Instead, reflect, identify the most important message, and summarize. In content areas, you can use active listening to clarify. An example of an "active listening" response to a content statement may be, "Jennifer, it sounds to me like you feel you understand the *[insert your own EMS process example]* process as a whole, but are having trouble linking *[x to y]*. What do you think?"

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | 3. Pay attention to signals from students<br>a. Regarding physical needs<br>b. Regarding distractions<br>c. Involve participants in resolution process |

950

## *ADDITIONAL INFORMATION*

Active listening is invaluable when dealing with emotional issues or with participants who are responding emotionally. After reflection, a simple statement such as "John, it seems to me that safety concerns are behind your objections to the new procedures" lets the student know that you take his or her concern seriously and are attempting to work with them. Do not be concerned about being wrong. Participants will quickly correct you if you are. If you have listened carefully and tried to understand, students will appreciate it. In fact, having someone listen carefully to their concerns is often sufficient to smooth out a difficult situation. Active listening requires work, but the dividends can be exciting.

3. Pay attention to signals from students

a. Regarding physical needs

Participants will give you cues about their physical needs. If they need a break, they may withdraw, begin holding side conversations, or even engage in challenging behavior. The most obvious sign that it is time for a break is participants leaving their seats.

b. Regarding distractions

If participants are distracted by noise or sounds, they will generally concentrate their attention on the source, withdraw, or hold side conversations. If participants are too hot or too cold, they will adjust the temperature themselves by removing or adding jackets, opening collars, fanning themselves, or huddling.

c. Involve participants in resolution process

Check out unclear cues of participants by using active listening techniques. Describe what you have noticed and suggest an interpretation. "I noticed some of you putting your jackets back on. Is it too cold in here?" If practical, give participants a choice when addressing a problem, particularly if they have strong feelings. "It seems like the group is ready for a break, but we have one short section left for this morning. Would you prefer to push on now and go to lunch when we're done, or take a ten-minute break now and come back to finish this section before lunch?" The group will be more likely to cooperate if they feel like they have some control.

*PARTICIPANT NOTES* | *LESSON PLAN*

## V. Summary

## References

*ADDITIONAL INFORMATION*

## V. Summary

This lesson has presented the importance of knowing your audience before you begin to instruct. Audience information allows you to tailor your presentation to meet the needs of your students, thereby making your presentation more effective. The lesson also discussed the importance of the learning environment, and suggested a variety of seating configurations depending upon the instructional objectives. Classroom management skills such as pre-class preparation and establishing ground rules were introduced. Finally, the principles of active listening, facilitation, and other facets of creating an interactive, participatory learning environment were discussed.

## References

Berliner, D.C., & Gage, H.G. (1991). Educational Psychology (5th ed.). Boston: Houghton Mifflin Co.

Heinich, R., Molendo, M., Russell, J.D. (1993). Instructional Media and the New Technologies of Instruction. New York: Macmillan Publishing.

# OBJECTIVES

# 6

- Overview of Training Design and Development ◂
- Preparing to Teach Existing Curriculum ◂
- Learning Objectives ◂
- Learning Domains ◂
- Getting Started—Determine Your Lesson Objectives ◂

## *OVERVIEW*

**Total time for this lesson:** 2 hours

### Introduction

This lesson is intended to familiarize you with the fundamental steps necessary to develop effective training materials. It also provides specific information on how to develop measurable objectives. Additionally, in this lesson you will complete the first of a series of exercises that will culminate in your final presentation.

### Lesson Objectives

Through group discussion, question and answer sessions, and individual activities, the EMS instructor trainee will be able to:

- List five basic phases of training design and development
- Explain how to apply your knowledge of the training design and development process to existing curriculum
- List the components of a measurable objective
- Explain the purpose of objectives, for participants and instructors
- Identify objectives as either affective, cognitive, or psychomotor

Given a lesson from the EMT-Basic course, the EMS instructor trainee should be able to:

- Evaluate existing lesson objectives and determine which are applicable
- Rewrite applicable objectives according to the A-B-C-D guidelines
- Demonstrate the ability, during your final presentation, to use these objectives as the basis for content presentation and student evaluation

### Materials Needed

- Overhead projector and screen
- Flipchart (prepared objectives)
- Flipchart and markers
- EMT-Basic Lessons, Appendix B

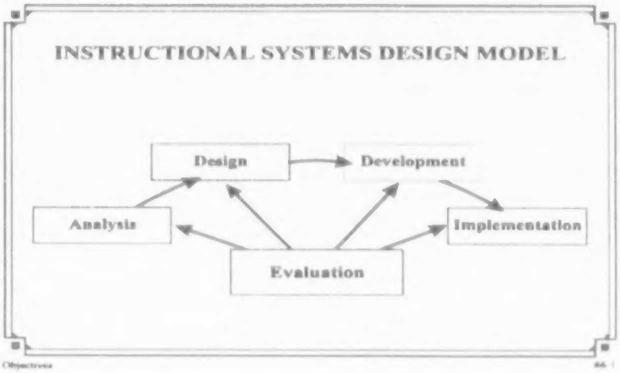
### Instructional Strategies

- Lecture
- Discussion
- Question and answer
- Activities
- Visual aids

## Lesson Objectives

### I. Overview of Training Design and Development

A. Instructional System Design (ISD)



INSTRUCTIONAL SYSTEMS DESIGN MODEL

Design

Development

Analysis

Implementation

Evaluation

Objectives

#6-1

1. Analysis phase
    a. Analysis phase outcomes
        (1) Overall course goals are determined
        (2) Audience is identified
        (3) Training delivery medium/media is selected

*ADDITIONAL INFORMATION*

## I. Overview of Training Design and Development

A systematic approach to the design and development of truly effective training materials has been established for many years. While the process is constantly being refined through research efforts, the basic elements have remained the same.

### A. Instructional System Design (ISD)

Instructional System Design (ISD) is a systematic, logical procedure used to develop curriculum and instruction. The following five phases are essential and will be discussed in detail in this lesson:

- Analysis
- Design
- Development
- Implementation
- Evaluation

1. Analysis phase

The analysis phase is the "fact finding" stage of ISD. This phase is critical because the information you collect and analyze is the foundation on which the remaining phases are built.

a. Analysis phase outcomes

In the analysis phase, the following three steps are accomplished:

(1) Overall course goals are determined

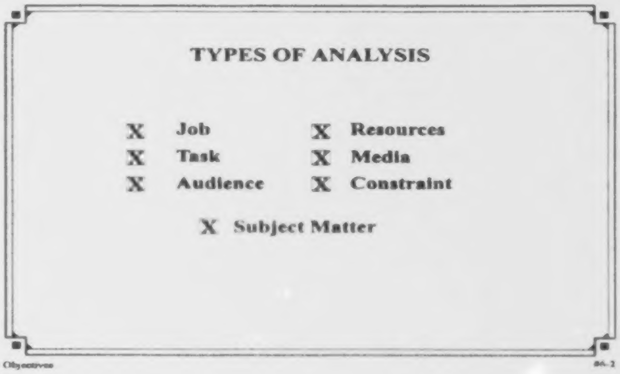
(2) Audience is identified

(3) Training delivery medium/media is selected

057

*PARTICIPANT NOTES* | *LESSON PLAN*

b. Types of analysis

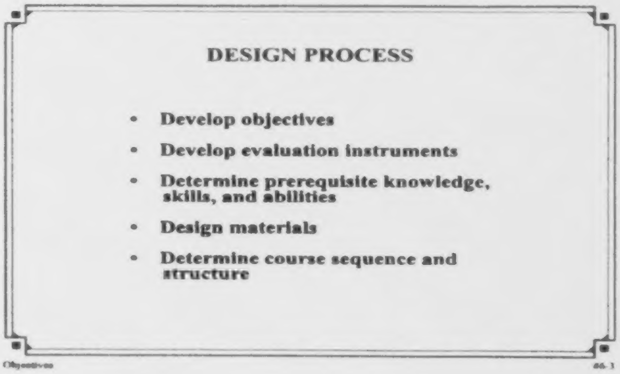


**TYPES OF ANALYSIS**

X Job
X Task
X Audience
X Resources
X Media
X Constraint
X Subject Matter

Objectives
06-2

2. Design phase



**DESIGN PROCESS**

- Develop objectives
- Develop evaluation instruments
- Determine prerequisite knowledge, skills, and abilities
- Design materials
- Determine course sequence and structure

Objectives
06-3

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958

## ADDITIONAL INFORMATION

Answers to the following questions are discovered in the analysis phase:

- Is the training needed?
- Exactly what skills and knowledge must be acquired?
- Who needs to be trained?
- What type(s) of training would achieve the desired result?
- What resources are available to develop and deliver training?
- Are there any constraints limiting the process?
- Which type of training delivery method(s) is optimal, given resources and constraints?

b. Types of analysis

- Job analysis—what skill must be learned or improved?
- Task analysis—how can that skill be broken down into specific tasks?
- Audience analysis—what are the significant attributes of the group that will receive the training?
- Resource analysis—what assets can we bring to bear to accomplish our training objectives?
- Constraint analysis—what are the limitations we must operate within?
- Subject matter analysis—what type of information will be conveyed in the training? What is the scope and depth?
- Media analysis—what is the most appropriate medium or media by which the instruction should be delivered?

2. Design phase

Having selected the ideal way to deliver a particular kind of subject matter, whether via an instructor in a classroom or by satellite to remote downlink locations, you are ready to begin the design of your course materials.

## OBJECTIVES

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | a. Objectives and evaluation instruments<br>b. Prerequisite knowledge, skills, and attitudes<br>c. Design of course materials |

## *ADDITIONAL INFORMATION*

a. Objectives and evaluation instruments

During the design phase, your course or curriculum starts to take shape. You write measurable objectives that reflect the performance you expect students to achieve, then you decide upon evaluation instruments that will measure student achievement of these objectives.

With well-defined objectives, you can determine exactly how to test achievement. You can write the test questions and design appropriate skill assessments that will measure student competence. And with the objectives and evaluation instruments in place, you can go on to develop the content of your lesson plan, making sure to present all of the information students will need to succeed when evaluated.

b. Prerequisite knowledge, skills, and attitudes

Once the objectives and the evaluation instruments are designed and developed, you can identify what knowledge, skills, and attitudes (KSAs) the students must bring to the course in order to be successful. It is important to establish a baseline of knowledge for your class, because even with certain prerequisites defined, the class is likely to be diverse and it will require imagination and flexibility to instruct students of varying levels and backgrounds. You should check with the state certification office to obtain their prerequisite requirements for specific courses. For example, in most states, you must pass EMT-Basic before you can take EMT Paramedic.

c. Design of course materials

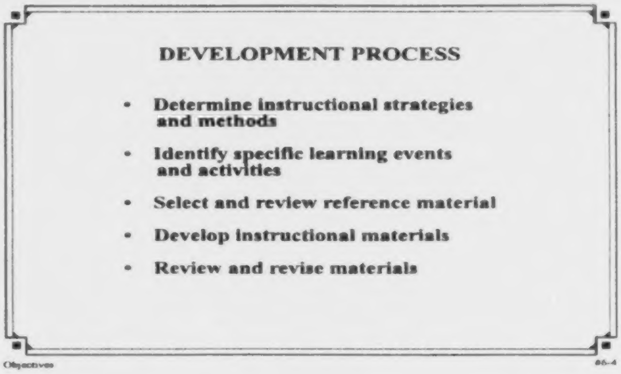
In the design phase, the "look and feel" of the materials that will be used to conduct the training should be decided upon. For example, guidelines for printed matter, such as the layout of the manual from which an instructor will ultimately teach, are determined. Also, the type of teaching methods, e.g., exercises, simulations, and class activities to be used will be decided, as well as the types of supporting media, such as overheads, videotapes, or graphic art.

For computer-based instruction, the design phase would involve how the material is presented on-screen, and how component parts of the program relate and interact with one another. Similar decisions are made when designing other presentations, such as video or correspondence courses.

*PARTICIPANT NOTES* | *LESSON PLAN*

   d. Sequence of course content

3. Development phase



DEVELOPMENT PROCESS

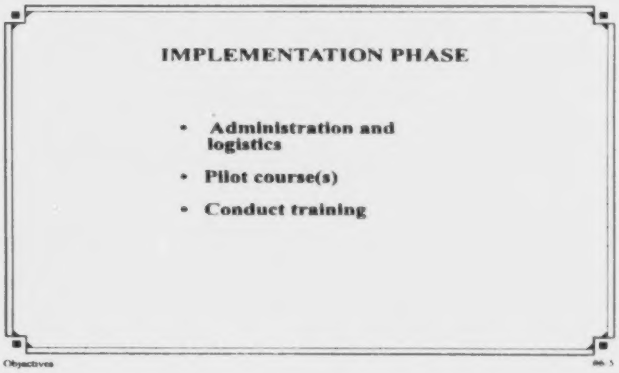
- Determine instructional strategies and methods
- Identify specific learning events and activities
- Select and review reference material
- Develop instructional materials
- Review and revise materials

Objectives 06-4

   a. Content is written

   b. Supporting media is created

4. Implementation phase



IMPLEMENTATION PHASE

- Administration and logistics
- Pilot course(s)
- Conduct training

Objectives 06-5

   a. Administration and logistics

d. Sequence of course content

The last step of the design phase is to determine the appropriate sequence for the course content. Take the material and arrange it in a logical order. Build from rudimentary skills and foundational concepts to more advanced analysis and application. Break the end result into manageable sections, and plan for milestones along the way to evaluate progress.

3. Development phase

a. Content is written

In this phase, the course content is drafted, reviewed, and edited. This includes the development of all exercises and activities.

b. Supporting media is created

Any supporting media, such as overheads, films, charts, or posters, will be created. The course materials developed should support your instructional strategies and methods and facilitate learning in the classroom and performance on the job.

4. Implementation phase

a. Administration and logistics

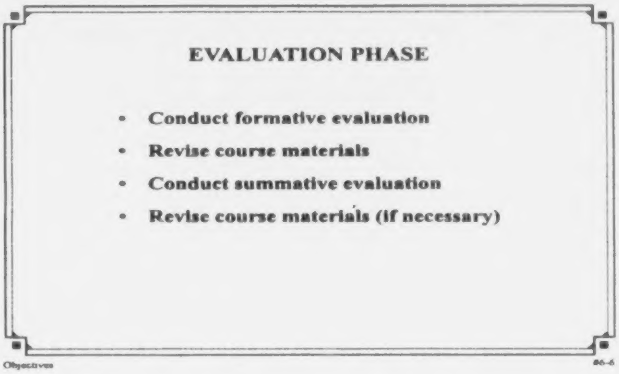
The implementation phase includes planning for the management and logistical elements of fielding the course. This means making arrangements for copies of materials, special equipment, additional instructors, classroom space, notification of students, etc. This part of the implementation process ensures that all materials will be in place when it comes time to teach.

*PARTICIPANT NOTES* | *LESSON PLAN*

b. Pilot course(s)

c. Conduct training

5. Evaluation phase



**EVALUATION PHASE**

- **Conduct formative evaluation**
- **Revise course materials**
- **Conduct summative evaluation**
- **Revise course materials (if necessary)**

Objectives

a. Formative evaluation

b. Summative evaluation

## *ADDITIONAL INFORMATION*

b. Pilot course(s)

Pilot courses are a means to gather valuable information about the training in a realistic setting while there is still an opportunity for revision. As such, pilot courses are part of the development process and are a type of evaluation. See section 5 below, or Lesson 7, Evaluation, for details. If a pilot course is included in the development plan, flaws in the design, content, sequence, and flow of the instruction can be identified during actual delivery and then targeted for improvement. Also, time frames allotted for sections can be redefined.

d. Conduct training—the final test of training materials comes when the course "hits the streets."

5. Evaluation phase

It is important to evaluate instruction during development as well as after course delivery.

a. Formative evaluation

Formative evaluation is a term used to describe the process of revising the course *while it is being developed*.

Formative evaluation uses data collected during the development phase to help *form the instruction*. Data can be collected by working with drafts of the course materials and a representative sample of the target audience. Pilot testing the course is a primary type of formative evaluation.

b. Summative evaluation

Summative evaluation is undertaken when course development is complete. Its purpose is to reach conclusions about how well the instruction worked. The most obvious type of summative evaluation instrument is an end of course test. We'll talk more about evaluation in Lesson 7.

*PARTICIPANT NOTES* | *LESSON PLAN*

## II. Preparing to Teach Existing Curriculum

A. Variety in curriculum design

1. DOT courses vary
2. Fully-scripted courses, all materials provided
3. Unscripted courses, some materials must be developed

## II. Preparing to Teach Existing Curriculum

Understanding the basics of training design and development helps you, as an instructor, prepare to teach existing courses. In this lesson and those that follow, you will learn how to apply each ISD phase: analysis, design, development, implementation, and evaluation, to all aspects of instruction. This will include working with lesson objectives, evaluation instruments, instructional strategies and methods, supporting media, lesson plan development, and course delivery.

### A. Variety in curriculum design

1. DOT courses vary

As an EMS instructor of DOT courses, you will generally not need to develop curriculum. However, the materials you receive from DOT will vary in style, organization, and readiness for delivery.

2. Fully-scripted courses, all materials provided

For example, there are courses, such as the Emergency Vehicle Operators Course (EVOC), that are fully developed and provide all of the course materials you need to teach. Instructional strategies have been devised and are scripted; thus the instructor guide prompts you to "start a discussion" or "conduct an activity." When you order the curriculum, all of the instructor/student guides, handouts, job aids, transparencies, and evaluation instruments are provided. When consistency is an issue, and for novice instructors, a fully-scripted course can be an advantage.

3. Unscripted courses, some materials must be developed

At the other end of the spectrum, there are courses which require more preparation time. For example, EMT-Basic provides you with lesson objectives, a presentation outline, and suggestions for preparation. A list of equipment requirements, both audio-visual and medical is included. There are suggestions for student activities and performance evaluation instruments, but the materials you will need to actually conduct the activity are not included, nor are the test questions or lesson format.

007

## OBJECTIVES

*PARTICIPANT NOTES*

*LESSON PLAN*

B. Apply your knowledge of ISD to existing curriculum

1. Evaluate and revise provided materials; design and develop supplementary materials

2. Subject matter expertise is an advantage

   Ask yourself the following questions when evaluating course materials:

   - Does the material convey complete and accurate information needed to perform the job/task requirements?
   - Do the evaluation instruments measure what the objectives say the students should be able to do?
   - Are appropriate instructional strategies and media being used to present the message in the most efficient and effective manner?
   - Is the material structured in a logical order, so that the instruction builds from simple to complex?

ADDITIONAL INFORMATION

**B. Apply your knowledge of ISD to existing curriculum**

Existing courses require different amounts of preparation. Your knowledge of the ISD process will help you to produce complete course materials ready for instruction both efficiently and according to established principles of training design.

1. Evaluate and revise provided materials, design and develop supplementary materials

When working with the DOT curriculum, your knowledge of ISD can help you in two ways. You can evaluate the completeness and appropriateness of the materials and revise accordingly. You can also design and develop additional materials when they have not been provided to you.

2. Subject matter expertise is an advantage

As an EMS instructor, you should be a subject matter expert in the area you are teaching. Not only does this enhance your credibility with the students, but it provides you a better base for preparing the materials for instruction.

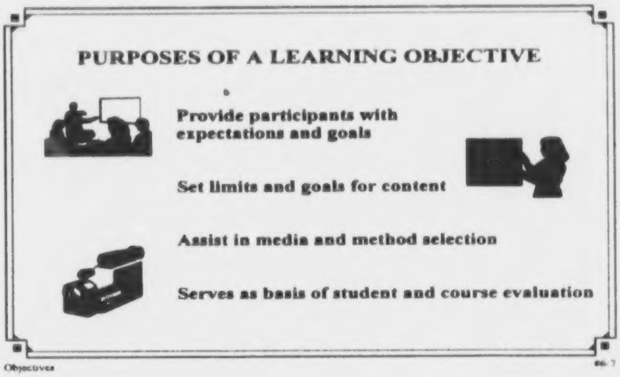
## III. Learning Objectives

A. Definition

1. Desired outcomes of the training

2. Types of outcomes

B. Purpose



PURPOSES OF A LEARNING OBJECTIVE

- Provide participants with expectations and goals
- Set limits and goals for content
- Assist in media and method selection
- Serves as basis of student and course evaluation

Objectives

1. Effect on participants

a. Stated goals help participants focus and achieve

970

ADDITIONAL INFORMATION

## III. Learning Objectives

### A. Definition

1. Desired outcomes of the training

Learning objectives are detailed descriptions of what participants should know and/or be able to do when they complete a unit of instruction.

2. Types of outcomes

As you create course and lesson objectives, it is time to begin thinking about exactly what will be required of the student to demonstrate proficiency.

For simplicity, objectives are sometimes referred to as knowledge- or performance-based. Obviously, these overlap; you cannot perform a skill accurately without knowledge. However, you can categorize objectives according to the *primary* type of outcome.

Later in the lesson we will discuss in detail the idea of *learning domains*. Learning domains can be used to categorize objectives according to the type of desired outcome, just like the terms "performance" and "knowledge." In fact, parallels exist between terms. For example, cognitive ⇒ knowledge-based and psychomotor ⇒ performance-based.

The discussion of learning domains also includes the term *affective* in order to describe desired outcomes that involve emotions and attitudes, an integral part of EMS service.

### B. Purpose

1. Effect on participants

a. Stated goals help participants focus and achieve

Participants learn best when they know, at the beginning of a lesson, what they are expected to know or do at the end of a lesson. A properly written list of objectives provides participants with information about the skills, knowledge, and attitudes they are expected to demonstrate. This helps provide a sense of direction and responsibility for learning.

*PARTICIPANT NOTES* | *LESSON PLAN*

b. Stated objectives encourage active learning

c. Objectives provide a measurable goal against which students can evaluate their progress

2. Effect on instructor, instruction

   a. Objectives provide basis for lesson content and delivery

   b. Objectives serve to focus instruction

   c. Objectives are the basis of student and course evaluation

*ADDITIONAL INFORMATION*

b. Stated objectives encourage active learning

Without stated objectives, participants are more likely to become *passive* attendees, since they must rely on the instructor to enable them to achieve goals known only to the instructor. With objectives provided, participants are given the purpose and outcomes expected from the instruction, thereby enlisting their *active* participation in the training.

c. Objectives provide a measurable goal against which students can evaluate their progress.

2. Effect on instructor, instruction

a. Objectives provide the basis for lesson content and delivery

Learning objectives are equally as important for the instructor. Learning objectives are the basis for planning the content, instructional strategies and supporting media to be used in each lesson.

The instructor must deliver the information in a way that directly supports student achievement of objectives. Carefully written objectives point the instructor toward appropriate teaching methods. For example, if the objective says the student must "demonstrate cardiopulmonary resuscitation (CPR) on an adult patient," the instructor must use several teaching methods to ensure student competence. These would probably include lecture, demonstration, and a practical exercise. The method suggests or even dictates the media; i.e., the practical exercise requires a manikin.

b. Objectives serve to focus instruction

The objectives help you cover exactly what is necessary, to set limits and goals for the material to be covered in each lesson. This keeps the lessons sharp and focused.

c. Objectives are the basis of student and course evaluation

Learning objectives help "close the loop" of instruction. Evaluation methods must be selected to ensure that learning objectives are met. Carefully written objectives give the instructor measurable criteria to use when designing and developing evaluation instruments.

*PARTICIPANT NOTES* *LESSON PLAN*

C. Activity 6.1—Use Your Objectives

1. Identify teaching methods based on a sample objective
2. Discuss the reasons why certain methods are more effective with specific objectives.

974

For example, if the student must "demonstrate CPR on an adult patient," written evaluation alone is not an effective evaluation instrument. Although students must have a cognitive understanding of the steps involved in CPR, and that knowledge might be tested in a written exam, the actual performance must be tested via a practical exercise. Actually, the term *psychomotor* implies both "knowing" and "doing," and thus is favored among some educators for its precision.

Later, in Lesson 7, we will discuss evaluation methods in detail. You will see that certain evaluation instruments more effectively measure certain types of learning objectives.

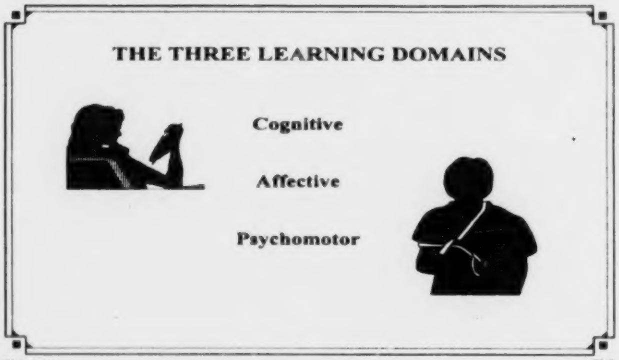
Finally, the effectiveness of the course itself can be evaluated by measuring student performance on the objectives. Weak areas of the presentation can be identified, particularly where students perform poorly, and the course can be improved.

### C. Activity 6.1—Use Your Objectives

Use a guided discussion to help students identify appropriate teaching methods based on a sample objective. Discuss the reasons why certain methods are a good fit with particular objectives.

## IV. Learning Domains

A. What is a learning domain?



**THE THREE LEARNING DOMAINS**

Cognitive

Affective

Psychomotor

Objectives #6-8

B. Why classify objectives by learning domain?

1. Expedites the selection of appropriate media and methods

*ADDITIONAL INFORMATION*

## IV. Learning Domains

### A. What is a learning domain?

Learning, as we discussed in Lesson 4, involves a lasting change in behavior or a newly acquired ability to behave in a particular way. These behavior changes or mastered skills are called learning outcomes, or objectives. Objectives can be classified into categories or domains, according to the type of behavior that is targeted.

There are many theories and approaches regarding objectives. However, most instructional design theorists and practitioners agree upon three learning domains. Each domain has a certain type of behavior as the primary goal of training. The three domains are called cognitive, affective, and psychomotor.

### B. Why classify objectives by learning domain?

On the surface, the concept of learning domains may seem a bit too academic. However, these categories help us, as instructors, to define more specifically exactly what we intend to accomplish and how we will go about it.

Classifying objectives by learning domain:

1. Expedites the selection of appropriate media and methods

By understanding the type of learning outcome that must be achieved, the instructor can select teaching methods and media that will be most effective in achieving that objective. For example, a student will learn a skills-based objective better through observation and hands-on practice than via a lecture or by reading an illustrated manual.

The reason for this is simple. Even though an illustrated manual might portray all of the steps accurately, have excellent pictures, and offer thorough explanations, a student does not get a "feel" for the process by reading and looking at pictures.

377

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | 2. Facilitates the selection of appropriate evaluation tools |
| | C. The Cognitive Domain |
| | 1. Description, typical wording of cognitive objectives |
| | 2. Cognitive skills are crucial for the EMS professional |

373

For example, no textbook can describe the resistance felt when trying to push a needle through skin. A book cannot tell a student how much pressure to use or how fast to go, at least not with accuracy. It is not until that student actually picks up the syringe and performs the task that full comprehension and competent performance can be achieved.

2. Facilitates the selection of appropriate evaluation tools

Remember, desired outcomes (learning objectives) are the foundation of the entire learning process. Just a basic understanding of learning domains can help an instructor to select the best evaluation instrument. For example, written exams are often used to evaluate objectives in the cognitive domain, while observation and peer evaluation are more often used to evaluate objectives in the affective and psychomotor domains.

We will discuss specific types of evaluation tools in Lesson 7, Evaluation. First, let's describe each domain in more detail.

### C. The Cognitive Domain

1. Description, typical wording of cognitive objectives

We use the term cognitive to describe a goal that relates to knowledge. Objectives that fall into this category often start with words like *describe, list, name, cite,* and *explain*.

2. Cognitive skills are crucial for the EMS professional

The cognitive domain of learning is comprised of mental skills ranging from simple to complex.

Cognitive skills are crucial for the EMS professional. To be effective, the Emergency Medical Technician (EMT) must memorize facts, such as the normal range of temperature or blood pressure for the human body. EMTs must also make assessments during emergency situations. These assessments involve higher level thinking skills.

*PARTICIPANT NOTES* | *LESSON PLAN*

3. Skill level—complexity of mental activity required

   The basic levels of mental activity, from simple to complex are to:

   - Recall
   - Understand
   - Apply
   - Analyze
   - Synthesize
   - Evaluate

## *ADDITIONAL INFORMATION*

3. Skill level—complexity of mental activity required

Educators and theorists have agreed on certain levels of mental activity, according to complexity. Here are the basic levels, using a non-medical and then a medical example:

a. Non-medical example

Recall—on what date was the Declaration of Independence signed?

Understand—why was it signed?

Apply—how does this information relate to a new situation?

Analyze—how can this event be broken down into parts? What factors were necessary and sufficient for this event to occur?

Synthesize—do those conditions exist elsewhere? Could a similar event happen again?

Evaluate—what other actions could have been taken? What would have been the outcomes of alternate actions?

b. Medical example

Recall—what is the normal range of blood pressure for the human body?

Understand—how does blood flow through the body? What factors affect blood pressure?

Apply—how does my understanding of blood pressure relate to this situation?

Analyze—what steps are necessary to prevent damage caused by abnormal blood pressure?

Synthesize—how does my understanding of blood pressure relate to other medical conditions?

Evaluate—what actions are possible, and what are the potential outcomes of alternate actions?

*PARTICIPANT NOTES* | *LESSON PLAN*

D. The Psychomotor Domain

1. Description, typical wording of psychomotor objectives
2. Types of skills—physical, mechanical, and manual
3. Skill level—degree of coordination required to perform the task

982

*ADDITIONAL INFORMATION*

### D. The Psychomotor Domain

1. Description, typical wording of psychomotor objectives

The term psychomotor refers to objectives that require a student to "do" something. This type of objective starts with words like *perform, administer, produce*, or *exhibit*.

2. Types of skills

The psychomotor domain involves physical, mechanical, and manual skills.

3. Skill level—degree of coordination required to perform the task

Like the other domains, the psychomotor domain is organized according to skill level. The levels are based upon the degree of coordination required to perform a task, and they progress from simple repetition to the highest level of mind/body coordination. For learning to occur most effectively, the student should progress through the levels sequentially.

The lowest psychomotor skill level is imitation, the simple repetition of an action observed. The next is independent action, in which the student must remember what was observed and perform. Accuracy is addressed at the next highest level, in which the student is expected to perform the action precisely as taught, without errors. At the fourth level, the student can function almost unconsciously, leaving his or her mind available to process other information.

High level psychomotor skills are essential for the EMS professional. Emergency situations are often chaotic and traumatic for those involved. Increasing proficiency in psychomotor skills to the level of efficient, unconscious performance allows the EMT to be aware of and handle demanding situations while performing routine procedures quickly and effectively.

*PARTICIPANT NOTES*

*LESSON PLAN*

4. How to teach a skill
    a. Demonstration
    b. Coaching
    c. Drilling
    d. Evaluation

## ADDITIONAL INFORMATION

4. How to teach a skill

In order to teach psychomotor skills, you have to understand the steps involved.

a. Demonstration

Demonstration is essential. Students must observe the action performed correctly and be able to imitate what they see.

b. Coaching

Coaching is important, because once learned incorrectly, a behavior is difficult to change. As an instructor, you must have sufficient staff on hand during practical exercises to offer immediate feedback to students. First demonstrate, then have students imitate what they observed. Watch their performance carefully. Note any missing steps or flaws in technique that can affect the success of their actions. Use corrective and positive feedback to guide them toward superior performance. Refer to Lesson 1, Instructor Roles and Responsibilities, for an explanation of these types of feedback.

c. Drilling

Drilling is merely repetitive practice. It is important for students to perform the same task over and over, until it becomes second nature. Educators talk about "kinetic memory." This term refers to the fact that, given enough repetition, our bodies begin to perform familiar actions unconsciously; e.g. riding a bike.

d. Evaluation

For most psychomotor skills, it is appropriate to use interim and final evaluations to secure optimal performance.

Interim evaluations can be done several ways. One method is to gradually increase the level of precision or accuracy required of your students. For example, you might allow for three errors when students perform an initial patient assessment during an interim evaluation, but only one for a final. Another form of interim evaluation might be to test on each step of a fairly complicated process. Or, you could change the conditions under which the skill is performed, if they affect difficulty.

## OBJECTIVES

*PARTICIPANT NOTES* | *LESSON PLAN*

5. Activity 6.2—Teach a Simple Skill
    a. Break into small groups
    b. Select a trainer, trainee(s), and an observer(s)
    c. Refer to references 6-1 and 6-2 in Appendix B
        - Giving Instructions
        - Demonstration Checklist
    d. Have the observer fill out a Demonstration Checklist for each training session. Rotate the roles of trainer, trainee(s) and observer.

The final evaluation should take place under similar conditions and with the same equipment the EMT would have on the job. Practical skill tests given by the state EMS offices are often the final evaluation of psychomotor skills learned in EMS courses. Prepare your students for their Practical Exams by replicating the exam conditions as closely as possible.

5. Activity 6.2—Teach a Simple Skill

Break into small groups and rotate the roles of trainer, trainees, and observer. The observer should use the Demonstration Checklist in Appendix B to record observations during the "training."

Have each of them teach the others a simple skill. Require them to break the skill down into sequential steps and make sure they use each step of the training process: demonstration, coaching, drilling, and evaluation.

097

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | E. The Affective Domain<br>1. Description, typical wording of affective objectives<br>2. Types of behaviors addressed by affective objectives<br>3. Skill level—degree of personal commitment and consistency |

089

## E. The Affective Domain

1. Description, typical wording of affective objectives

The affective domain is perhaps the least understood of the three learning domains. However, the delivery of emergency medical services demands an understanding of the emotional and psychological factors that affect a patient's well-being and ultimate recovery. It also demands an understanding of the appropriate attitudes to be exhibited by EMS professionals. This is why affective learning objectives are included in some EMS courses.

Affective objectives might include words like *explain*, *demonstrate*, *display*, or *as evidenced by*.

2. Types of behaviors addressed by affective objectives

The affective domain of learning encompasses attitudes, feelings, and values. Achievement of affective objectives is the most difficult to measure, since it is difficult to know when an attitude, feeling, or value has truly been instilled. In addition, affective learning may be displayed over time, since it can involve long periods of experience, debate, mentoring, and soul-searching. Communication skills are one example of affective learning outcomes. Other instructor skills, such as the ability to appropriately counsel your students, have affective components as well. A proper method of evaluating communication and/or counseling skills might be observation, using a checklist of desired behaviors.

3. Skill level—degree of personal commitment and consistency

Skill in the affective domain involves sensitivity to and awareness of the needs of others. It means reacting in such a way that patients feel safe and confident they are in competent hands. An EMS student who is developing affective skills will demonstrate genuine interest in the emotional and psychological well-being of each and every patient. Over time, the student will act consistently, in accordance with values that have been internalized, not mandated.

In other words, the targeted behaviors of empathy, the ability to engender trust, and the ability to listen attentively will be demonstrated time after time, in stressful situations.

080

*PARTICIPANT NOTES* | *LESSON PLAN*

4. Activity 6.3—Writing Affective Objectives (optional)
    a. Write an affective objective
    b. Describe how you would teach the skill

F. Activity 6.4—Objectives by Learning Domain

1. Form small groups; select a reporter, facilitator, and timekeeper. You will have 10 minutes to complete the task
2. Write 2 objectives for each domain on the topic assigned
3. The group reporter will present your conclusions to the class

## V. Learning Your ABCD's—How to Write a Useful Objective

A. Components of a well-written objective: A-B-C-D

1. A is for Audience

390

4. Activity 6.3—The Affective Domain (optional)

This is an optional activity that can be used to further acquaint students with the affective domain. In Appendix A, scenario cards have been provided with descriptions of situations requiring affective skills, as well as a blank card if you prefer to create your own or to have students generate the scenario.

Instruct students to write an objective that targets the desired behavior. Then have them describe how they would teach the affective skill. Debrief as a class.

### F. Activity 6.4—Objectives by Learning Domain

Now give students a chance to apply what they've learned by writing objectives according to the primary learning domain.

Students will work in small groups, selecting a facilitator, reporter, and timekeeper as before. Given assigned topics on which to instruct, students will generate two objectives targeting each learning domain. The reporter will present the results to the class.

## V. Learning Your ABCD's—How to Write a Useful Objective

We have all been the victim of ambiguous objectives, like "The student will have a deeper understanding of the concept of shock." This kind of objective leaves a lot of room for interpretation and provides no definite way to measure achievement of the objective.

A well-stated objective, however, leaves no room for doubt!

### A. Components of a well-written objective

1. A-B-C-D

a. A is for Audience

An effective instructional design will focus on keeping the learner active, attentive, and interested. Therefore, each learning objective should first acknowledge who the learner is (e.g., the new EMS Instructor trainee, the third year EMT). However, if the objectives are being presented to one homogeneous group, the audience can simply be stated as "you" or "participants."

## OBJECTIVES

*PARTICIPANT NOTES* | *LESSON PLAN*

2. B is for Behavior
3. C is for Conditions
4. D is for Degree

*ADDITIONAL INFORMATION*

b. B is for Behavior

Probably the most important part of the learning objective is the stated behavior. What will the participant be able to do at the end of the instruction? Since behavior is an action, the behavior in an instructional objective is always stated as a verb. Furthermore, the behavioral term should be specific and observable. For example, we cannot observe "knowing" or "understanding," and definitely not "deeply understanding." But, we can observe "listing," "building," and "choosing."

Finally, as you write the behavior, try to match it as closely as possible to the real world experience to which the trainee will return. For example, if the trainee must "wrap a bandage around a knee" in the real world, state it that way, rather than "state the method to wrap..."

A list of terms used to describe behavior in instructional objectives is provided in Appendix B for future reference.

c. C is for Conditions

Trainees must be aware of the conditions under which they are expected to execute the behavior stated in an objective. The objective must state what tools, equipment, or other resources will be provided. It must also state any special environmental conditions under which the behavior must be performed. For example, "given a model of the human body, identify the following organs..."

d. D is for Degree

Finally, objectives must be measurable and state the criterion against which acceptable performance will be judged.

An example:

An EMS student (*audience*), given a blank pre-hospital report (*condition*), will complete the report (*behavior*) for a patient with shock (*condition*) with 100 percent accuracy (*degree*).

003

B. Activity 6.5—Determine Your Lesson Objectives

1. Take out the EMT-Basic lesson you were assigned for the final presentations
2. Identify which learning domain each objective targets
3. Evaluate the objectives, using the A-B-C-D guidelines
4. Rewrite the objectives as necessary

## VI. Summary

*ADDITIONAL INFORMATION*

### B. Activity 6.5—Determine Your Lesson Objectives

The objectives for this activity are as follows:

Given a lesson from the EMT-Basic course, the EMS instructor trainee will be able to:

- Evaluate existing lesson objectives and determine which are applicable
- Rewrite applicable objectives according to the ABCD guidelines for writing objectives
- Demonstrate the ability, during your final presentation, to use these objectives as the basis for content presentation and student evaluation

This is the first of a series of exercises which will culminate in the final presentations. Students will work with the lesson objectives as stated in the EMT-Basic lesson to which they were assigned and then refine them based upon the principles discussed in this lesson. The EMT-Basic lessons are located in the Final Presentation section.

Students should identify the learning domain targeted by each objective, use the A-B-C-D guidelines provided in Appendix B to evaluate each objective and rewrite as necessary. Students may want to refer to the List of Behavioral Terms located in Appendix B as well. The instructor and/or assistants should provide guidance and feedback.

## VI. Summary

This lesson presented an overview of the five phases of the ISD process and demonstrated the importance of clearly written learning objectives. Objectives let students know precisely what is expected of them and how they will be evaluated. Objectives also provide the instructor with the basis for lesson content and delivery.

The three learning domains, cognitive, psychomotor, and affective, and their relationship to objectives was covered. Finally, the ABCD technique for writing effective objectives was presented.

## *ADDITIONAL INFORMATION*

### References

Heinich, Robert; Molenda, Michael, et.al. "Systematic Planning for the Use of Media" *Instructional Media (Fourth Edition)*. Macmillan Publishing Company. New York. 1993.

Herman, Joan L. (Ed.), *Program Evaluation Kit (Second Edition)*. Sage Publications. Newbury Park, California. 1987.

*A set of books intended to assist the user in conducting program evaluation. Useful for experienced and novice program evaluators, each book contains step-by-step procedural guides, real-life examples, and vocabulary definitions. Books in the set include: The Evaluator's Handbook, How to Focus an Evaluation, How to Design a Program Evaluation, How to Use Qualitative Methods in Evaluation, How to Assess Program Implementation, How to Measure Attitudes, How to Measure Performance and Use Tests, and How to Analyze Data.*

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Mager, Robert F. "Preparing Instructional Objectives" *The New Mager Six-Pack*. Lake Publishing Company. Belmont, California. 1988.

Silberman, Mel. "Developing Active Training Objectives" *Active Training*. Lexington Books. New York, New York. 1990.

# EVALUATION

## 7

Purpose(s) and Types of Evaluation ◄
Evaluation Instrument Development Principles ◄
Cognitive Test Item Development ◄
Affective and Psychomotor Test Item Development ◄
Getting Started—Create Your Own Evaluation Instrument(s) ◄

## OVERVIEW

**Suggested instructional time for this lesson:** 2 hours

### Introduction

The goal of all instruction is to raise the students' demonstrated understanding or performance. How does a student demonstrate understanding? How do we, as instructors, measure performance? The purpose of this lesson is to give you some background in evaluation methods and then help you to acquire the skills you need to develop effective evaluation instruments yourselves. In this lesson, you will create evaluation instruments that will be part of your lesson presentation package at the end of this course.

### Lesson Objectives

Through group discussion, question and answer sessions, and individual activities, the EMS instructor trainee should be able to:

- State two purposes for evaluation
- Define the concepts of validity and reliability
- List five types of test item types for measuring cognitive objectives.

Using the revised objectives for their EMT-Basic lesson, the EMS instructor trainee should be able to:

- Use the rules of development for various test item types to develop evaluation instrument(s) that effectively measure student achievement of the lesson objectives.

### Materials Needed

- Overhead projector and screen
- Flipchart (prepared objectives)
- Appendix B
- Flipchart and markers

### Instructional Strategies

- Lecture
- Discussion
- Question and answer
- Activities
- Visual aids

*PARTICIPANT NOTES* | *LESSON PLAN*

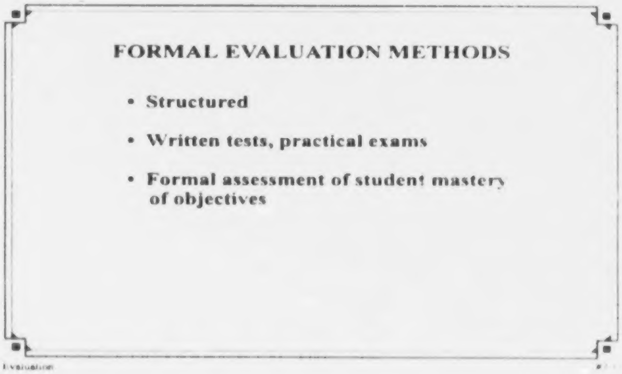
## Lesson Objectives

### I. Purposes of Evaluation

A. Measure effectiveness of instruction

B. Measure participant performance

1. Formal methods



**FORMAL EVALUATION METHODS**

- Structured
- Written tests, practical exams
- Formal assessment of student mastery of objectives

Evaluation

999

## ADDITIONAL INFORMATION

### I. Purposes of Evaluation

Evaluation should be a continuous, planned process during course development as well as after course completion. There are several types of evaluation that we will cover in this lesson that serve multiple purposes in the instructional development and implementation process.

**A. Measure effectiveness of instruction**

It is important to remember that the primary goal of all evaluation is to provide instructors with the necessary information required to make the instruction as effective as possible in order to graduate the most highly trained students possible.

Evaluation of student performance provides a method of determining where there are weaknesses in the instruction. If students are having difficulty with assignments or passing tests, it may indicate problems with your objectives, instructional strategies, and/or your assumptions of the entry-level knowledge or skills of your students.

**B. Measure participant performance**

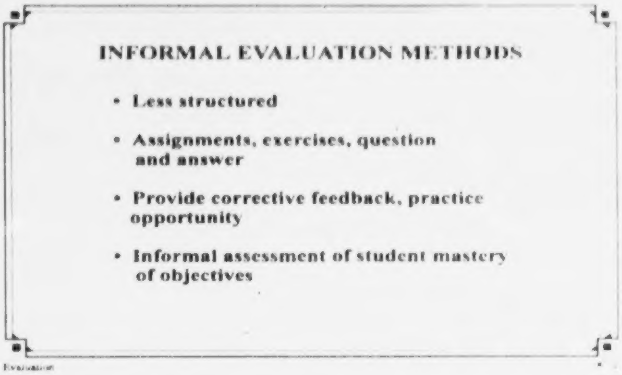
Evaluation is a mechanism of determining student progress toward, or the attainment of cognitive, affective, and psychomotor objectives. The methods of evaluation used can be either *formal* or *informal*.

1. Formal methods

Formal methods of evaluation refer to structured instruments, such as written tests or practical exams that are used to assess student attainment of learning objectives both during and after training.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|

2. Informal methods



**INFORMAL EVALUATION METHODS**

- Less structured
- Assignments, exercises, question and answer
- Provide corrective feedback, practice opportunity
- Informal assessment of student mastery of objectives

Evaluation

3. Pretest/posttest comparison
4. Surveys and questionnaires
5. Peer review and observation

1001

## *ADDITIONAL INFORMATION*

2. Informal methods

   Informal methods of evaluation refer to less structured means of assessing student achievement of learning objectives, such as student assignments, exercises, oral quizzes, or question and answer sessions, primarily to provide corrective feedback to the student.

3. Pretest/posttest comparison

   Administering both a pretest before the course begins and a posttest covering the same material after the course ends is another method of determining how effective the instruction was. A comparison of test scores shows how much performance has improved, and a comparison of performance on individual test items shows where there are weaknesses in the instruction.

4. Surveys and questionnaires

   In addition, assessments of the effectiveness of instruction can be gathered through the use of surveys or questionnaires administered during or at the conclusion of training. These surveys primarily evaluate students' reaction to the instruction. A sample of this type of survey used with the Instructor Training Course is provided in Appendix B.

5. Peer review and observation

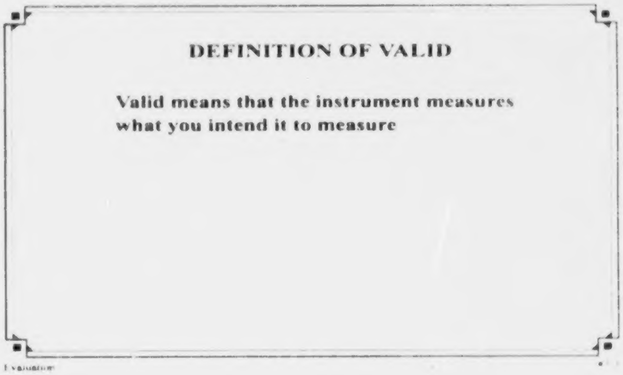
   Peer review can take place during the development of instruction as well as during the actual instruction. Guidelines or checklists covering the areas that you want the peer review or observation to focus on should be provided to those involved.

*PARTICIPANT NOTES* | *LESSON PLAN*

## II. Evaluation Instrument Development Principles

A. Must be based on objectives

B. Must be valid



**DEFINITION OF VALID**

**Valid means that the instrument measures what you intend it to measure**

Evaluation

## II. Evaluation Instrument Development Principles

### A. Must be based on objectives

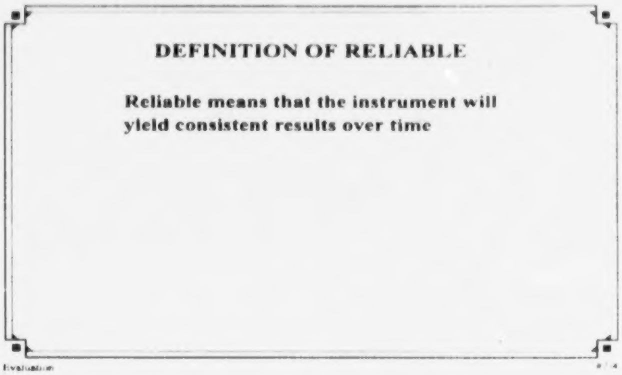
Your learning objectives drive evaluation instrument construction. Cognitive, or knowledge-based objectives are best evaluated by written or oral tests. Affective and psychomotor objectives are more accurately measured by practical/performance exams or by observation.

For example, if you want to know if a student can apply emergency care to a superficial burn victim, then the student should be evaluated actually performing the emergency care steps in a simulated emergency situation.

### B. Must be valid

As you develop and refine your evaluation instruments, it is important to ensure that they are both *valid* and *reliable*. Valid means that the instrument measures what you intend it to measure. Basing your evaluation instruments on learning objectives helps ensure that your evaluation instrument is valid. The question to ask yourself to determine whether your evaluation instrument is valid is "Do these items measure the behaviors, conditions, and standards stated in my objectives?" For example, if an objective states "Demonstrate completing a prehospital care report for patients with musculoskeletal injuries" then the test is clear: "Here is a prehospital care report; complete it for a patient with the following specified musculoskeletal injuries."

C. Must be reliable



**DEFINITION OF RELIABLE**

**Reliable means that the instrument will yield consistent results over time**

Evaluation 7-4

D. Must be based on learning domain

## *ADDITIONAL INFORMATION*

### C. Must be reliable

A reliable evaluation instrument means that it will yield consistent results over time. In other words, if you administer the same practical exam under the same conditions with several classes of students with similar knowledge and experiences, the results should be similar each time it is given.

### D. Must be based on learning domain

There are many different question types that you can use to develop formal evaluation instruments that will measure the degree of mastery of your cognitive, affective, and psychomotor objectives. We will review the most common types, along with guidelines to follow in creating each type.

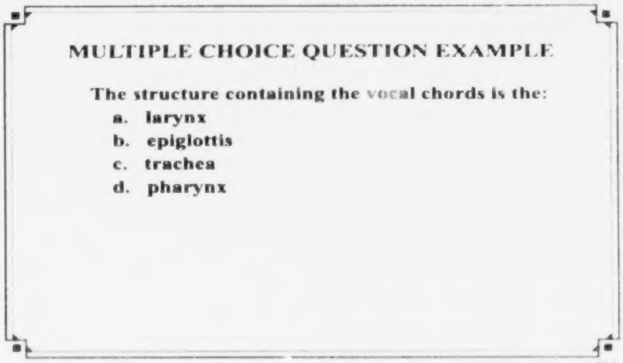
*PARTICIPANT NOTES* | *LESSON PLAN*

## III. Cognitive Test Item Development

A. Written and oral tests

B. Multiple choice questions

1. Stem and distractors



**MULTIPLE CHOICE QUESTION EXAMPLE**

**The structure containing the vocal chords is the:**

- **a. larynx**
- **b. epiglottis**
- **c. trachea**
- **d. pharynx**

Evaluation

## III. Cognitive Test Item Development

### A. Written and oral tests

Cognitive, or knowledge-based objectives are best evaluated by written or oral tests. The advantages of written examinations are that they:

- Can be used efficiently with large numbers of students
- Provide better for consistent scoring

The advantages of oral exams are that they:

- Can evaluate "quick thinking" or reactions
- Can be evaluated by multiple listeners simultaneously

Whether you use written or oral tests should depend primarily on the real-word conditions under which the student will be expected to apply the learned material.

### B. Multiple choice questions

Multiple choice questions are the most common type of written test question used in the EMT community. Multiple choice questions are useful for testing a student's ability to recognize or recall information.

1. Stem and distractors

A multiple choice question is made up of two parts, the *stem* which is the question, and the *distractors*, which are the possible answers. For example:

- The structure containing the vocal chords is the:

a. larynx
b. epiglottis
c. trachea
d. pharynx

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | 2. Rules for development |
| | C. Group Activity 7.1 - Multiple Choice Questions |
| | 1. Small groups |
| | 2. Choose lessons |
| | 3. Create multiple choice questions |
| | 4. Post flipchart pages and review |

1009

*ADDITIONAL INFORMATION*

2. Rules for development

Rules for developing the stem are as follows:

- State briefly and clearly.
- Address only one problem or concern per question.
- State as a question or incomplete sentence.
- Use positive rather than negative statements.
- Include as much information in the stem as possible, rather than repeating the same term(s) in the distractors.
- End the stem with "a(n):" if one or more distractors begins with a vowel sound; otherwise end the stem with "a:".

Rules for developing the distractors are as follows:

- Include one choice that is clearly the best.
- Use words and phrases drawn from the instructional material that could be plausible alternatives to the correct answer.
- Distractors should be approximately equal in length and with parallel structure, e.g., all nouns, verbs, phrases.
- Distractors should not be synonymous.
- Use discretion when including humorous distractors. If used, they should be viable distractors as well as being clever.

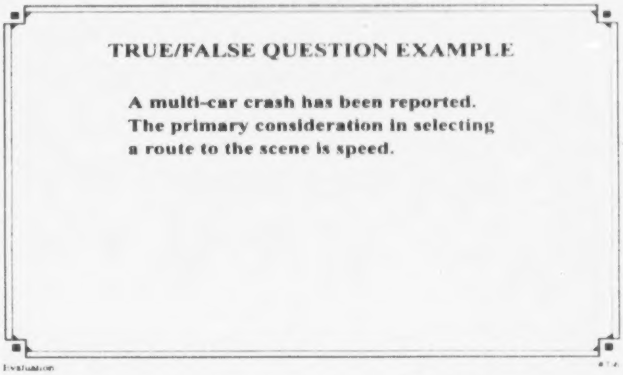
## C. Activity 7.1

1. Divide students into small groups or pairs.
2. Ask groups to review the lesson objectives from Lessons 1 - 7 of the Instructor Training Course.
3. Ask groups to take 20 minutes to create as many multiple choice questions as possible on flipchart paper from the lesson objectives.
4. Post flipchart pages and review for correctness by comparing each question to its objective and the rules for developing multiple choice questions.

*PARTICIPANT NOTES* | *LESSON PLAN*

D. True/false questions

1. Example



**TRUE/FALSE QUESTION EXAMPLE**

**A multi-car crash has been reported.
The primary consideration in selecting
a route to the scene is speed.**

Evaluation

2. Rules for development

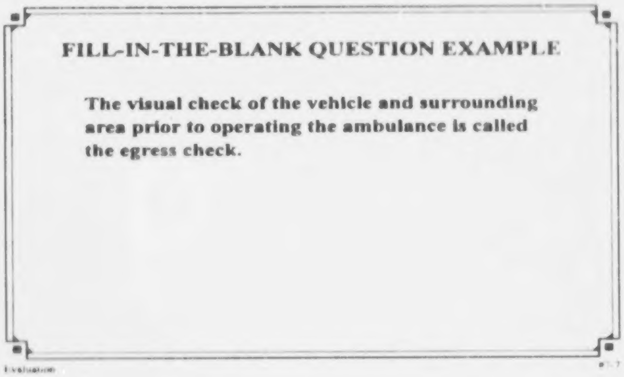
1011

*PARTICIPANT NOTES*

*LESSON PLAN*

E. Fill-in-the-blank questions

1. Example



**FILL-IN-THE-BLANK QUESTION EXAMPLE**

**The visual check of the vehicle and surrounding area prior to operating the ambulance is called the egress check.**

Evaluation

#7-7

2. Rules for development

1012

## ADDITIONAL INFORMATION

### E. Fill-in-the-blank questions

Fill-in-the-blank questions are best for testing a student's knowledge of specific terms.

1. Example

- The visual check of the vehicle and surrounding area prior to operating the ambulance is called the egress check.

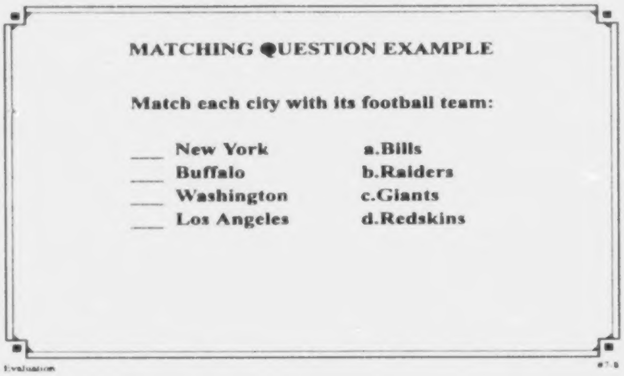
2. Rules for development

- Do not use fill-in-the-blank questions if the response is so general that many common words could be considered correct.
- Make the blank line about four to six spaces longer than the longest acceptable answer.
- If the blank is preceded by a "a" or "an", use "a(n)" so that you do not give away whether the answer begins with a vowel or a consonant.
- Let students know how many words are in the answer (or if the answer is a number) by indicating this information in parentheses at the end of the question, e.g., "(number)" or "(two words)".

*PARTICIPANT NOTES* | *LESSON PLAN*

F. Matching questions

1. Example



**MATCHING QUESTION EXAMPLE**

**Match each city with its football team:**

**___ New York a.Bills**
**___ Buffalo b.Raiders**
**___ Washington c.Giants**
**___ Los Angeles d.Redskins**

Evaluation

#7-8

2. Rules for development

*ADDITIONAL INFORMATION*

## F. Matching questions

Matching questions are good for testing a student's ability to classify information.

1. Example

- Match each city with its football team:

| | |
|---|---|
| ___ New York | a. Bills |
| ___ Buffalo | b. Raiders |
| ___ Washington | c. Giants |
| ___ Oakland | d. Redskins |

2. Rules for development

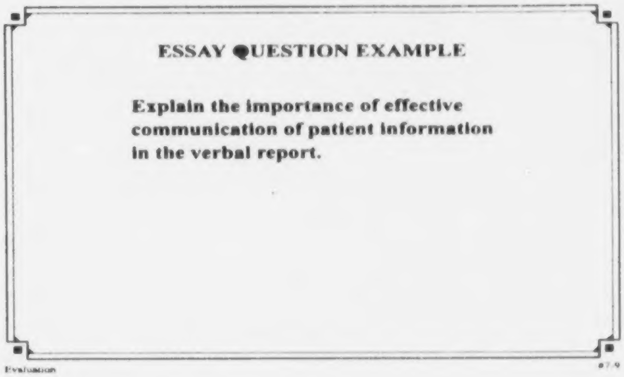
- The set of matching items and responses should consist of three to eight items.
- There can be an equal number of items in each column or more responses than items.
- For ease of student answering and instructor grading, the items and responses should all be on one page.
- All items and responses should be within the same system or organization.

PARTICIPANT NOTES

LESSON PLAN

G. Essay questions

1. Example



**ESSAY QUESTION EXAMPLE**

**Explain the importance of effective communication of patient information in the verbal report.**

Evaluation

#7-9

2. Rules for development

1016

ADDITIONAL INFORMATION

## G. Essay questions

Essay questions are most appropriate for testing higher level cognitive objectives, such as synthesis or evaluation. Essay questions can also be used to assess some types of affective objectives.

1. Example

- Explain the importance of effective communication of patient information in the verbal report.

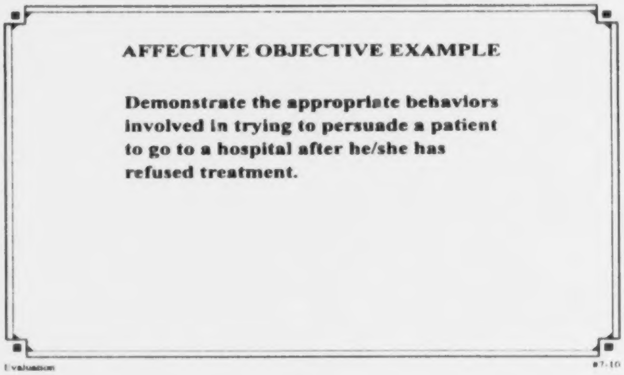
2. Rules for development

- Write specific questions that can be answered briefly.
- Prepare an answer key with all the important details you expect students to cover.
- If possible, have students use code numbers rather than their names to decrease scorer bias.
- If there are multiple essay questions, score all papers on the first question before going on to the second.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|

## IV. Affective and Psychomotor Test Item Development

A. Affective objective example



AFFECTIVE OBJECTIVE EXAMPLE

Demonstrate the appropriate behaviors involved in trying to persuade a patient to go to a hospital after he/she has refused treatment.

Evaluation

#7-10

*ADDITIONAL INFORMATION*

## IV. Affective and Psychomotor Test Item Development

Affective and psychomotor objectives are more accurately measured by practical/performance exams or by observation. Evaluation instruments for these two domains of learning usually take the form of checklists, rating scales, and skill sheets.

### A. Affective objective example

An example of an affective objective that could be evaluated through the use of a checklist or rating scale in a role-play situation is as follows:

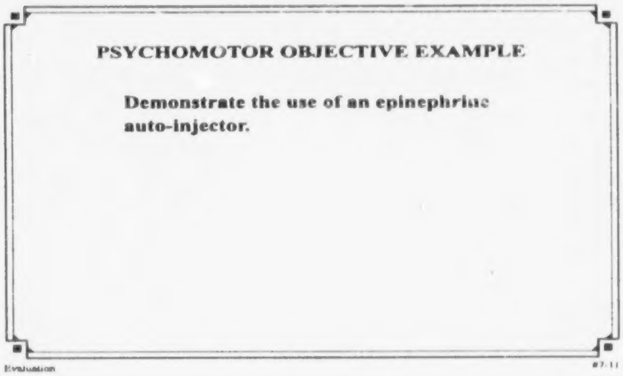
- Demonstrate the appropriate behaviors involved in trying to persuade a patient to go to a hospital after he/she has refused treatment.

In order to evaluate a student's mastery of this objective, a checklist of behaviors to be exhibited and actions to take in the situation described should be documented. This list would be used be observers to rate the performance of the student in a role-play scenario.

*PARTICIPANT NOTES*

*LESSON PLAN*

B. Psychomotor objective example



PSYCHOMOTOR OBJECTIVE EXAMPLE

**Demonstrate the use of an epinephrine auto-injector.**

Evaluation

#7-11

C. Rules for development

10.20

*ADDITIONAL INFORMATION*

### B. Psychomotor objective example

An example of a psychomotor objective that could be evaluated through the use of a skill sheet is as follows:

- Demonstrate the use of an epinephrine auto-injector.

The skill sheet used to evaluate this objective in the EMT-Basic Course is shown in Appendix B.

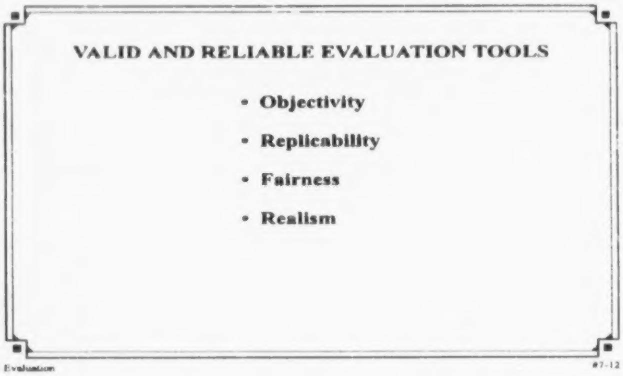
### C. Rules for development

- Steps are described independently of each other and listed in the order in which they should be performed.
- Steps are independently observable and measurable.
- The minimum number of steps necessary to complete the task are included.
- Assign different point values to each step if some are more important or more difficult than others.
- Each evaluator understands scoring criteria.

1021

*PARTICIPANT NOTES* | *LESSON PLAN*

D. Characteristics of valid and reliable performance evaluations



VALID AND RELIABLE EVALUATION TOOLS

- **Objectivity**
- **Replicability**
- **Fairness**
- **Realism**

Evaluation

#7-12

E. Individual Activity 7.2 - Evaluation Instruments

1. Refer students to assigned EMT-Basic revised objectives.
2. Begin developing test items for use in Lesson Plan Development Lesson.

## V. Summary

### D. Characteristics of valid and reliable performance evaluations

In addition to the rules stated above for developing practical/performance evaluation tools, be sure to consider the following characteristics in developing and administering performance checklists, rating scales, and skill sheets:

- Objectivity. Is the instrument objective in what it is attempting to measure? Is the observer objective?
- Replicability. Does the instrument measure similar performances across students? Across classes? Across locations?
- Fairness. Are the standards known by the students in advance of testing? Has practice been provided with similar instruments and scenarios during training?
- Realism. Is the situation under which the students are being tested plausible? Are external distractions realistic? Is the stress level similar to that in the field environment?

Remember that you are evaluating performance, not the student. When using checklists and rating scales, be sure that your individual biases regarding students do not enter into your evaluation of performance.

### E. Activity 7.2 - Evaluation Instruments

Instructor trainees should refer to the revised objectives from the EMT-Basic lesson they were assigned for final presentations. The students should begin developing test items which could be used to measure student performance against the objectives. If time does not permit completion of the test items, students can finish them in the Lesson Plan Development Lesson.

## V. Summary

This lesson presented information on the purposes and types of evaluation instruments as well as the principles to consider when developing evaluation instruments. It also addressed the various test item types to be used to evaluate cognitive, affective, and psychomotor objectives. The importance of valid and reliable evaluation instruments was covered. Practice was provided in developing various question types based on lesson objectives.

# EVALUATION

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | **References** |

*ADDITIONAL INFORMATION*

## References

Glasgow, Zita; Schumacher, Sanford. "Handbook for Designers of Instructional Systems" Preliminary printing by Applied Science Associates of a Technical Report to be published by the Air Force Human Resources Laboratory. Wright Patterson Air Force Base, Ohio. 1974.

Heinich, Robert; Molenda, Michael, et.al. "Systematic Planning for the Use of Media" *Instructional Media (Fourth Edition)*. Macmillan Publishing Company New York. 1993.

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Silberman, Mel. "Developing Active Training Objectives" *Active Training*. Lexington Books. New York, New York. 1990.

# INSTRUCTIONAL STRATEGIES AND METHODS

## 8

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Parts of Instruction ◂
Teaching Methods ◂
Getting Started—Decide on Your Methods ◂
Communication and Presentation Skills ◂

# INSTRUCTIONAL STRATEGIES AND METHODS

## *OVERVIEW*

**Suggested instructional time for this lesson:** 3 hours

### Introduction

Instructional strategies and methods are the heart of your course presentation; and selecting the appropriate ones will determine how effective your training will be. This lesson covers strategies and methods, their advantages, disadvantages, when to use them, and how to use them. It also addresses instructor skills, such as effective communication, questioning, and presentations, and provides students the opportunity to practice those skills.

### Lesson Objectives

Through group discussion, question and answer sessions, and individual and group activities, the EMS instructor trainee should be able to:

- Define instructional strategies
- List the four parts of instruction
- List six teaching methods
- Describe two advantages and two disadvantages for each method listed
- Determine an appropriate teaching method given an objective
- Apply the principles of active listening in a roleplay exercise
- List five guidelines for effective presentations

Given the newly written objectives for their EMT Basic lesson, the EMS instructor should be able to select and design the appropriate instructional strategies that will facilitate student achievement of the new lesson objectives.

### Materials Needed

- Overhead projector
- Flipchart and markers
- Handouts
- Video camera (if available)
- TV (if video camera is used)
- VCR (if video camera is used)

### Instructional Strategies

- Lecture
- Question and answer
- Discussion
- Activities
- Practice/simulation

1027

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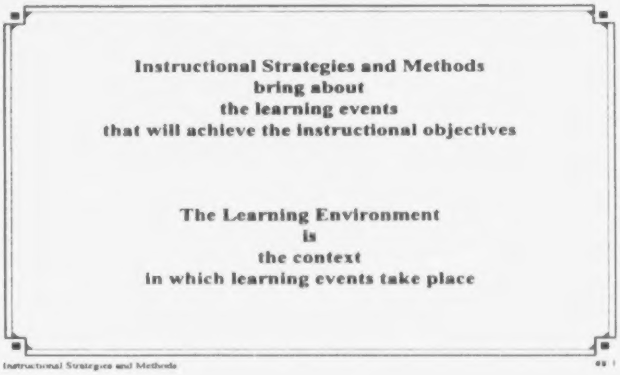
PARTICIPANT NOTES | LESSON PLAN

## Lesson Objectives

### I. Introduction to Instructional Strategies and Methods

A. Overview



**Instructional Strategies and Methods**
**bring about**
**the learning events**
**that will achieve the instructional objectives**

**The Learning Environment**
**is**
**the context**
**in which learning events take place**

Instructional Strategies and Methods

1. Purpose/benefit of this lesson
2. Definitions
    a. Strategy

1023

## I. Introduction to Instructional Strategies and Methods

### A. Overview

As an instructor, you are responsible for determining the instructional strategies and methods that will best facilitate the attainment of the course and lesson objectives.

1. Purpose/benefit of this lesson

This lesson is designed to give you an overview of instructional strategies, to acquaint you with various teaching methods, to provide guidance in methods selection, and practice in their application.

All of the objectives for this course have one purpose, to help you develop the skills you need as an EMS instructor. This lesson will teach you how to design an appropriate mix of well-designed learning events, in order to motivate your future students and increase their ability to apply what they've learned on the job. The lesson also addresses key instructor skills.

2. Definitions

a. Strategy

The term strategy originally applied to the art of military command. In an educational setting, your instructional strategy defines the overall plan for accomplishing the course goals. To develop an effective strategy, you need to know what it is you are trying to accomplish. For example, the primary objective of this course is to produce knowledgeable and competent instructors. For an ambulance course, it may be to produce competent, safe, and knowledgeable ambulance drivers. As we have discussed, these outcomes can include knowledge components as well as performance components. Knowing the desired outcomes, you then devise a strategy that will work.

Do you remember back to the training delivery selection process and the discussion about how courses can be delivered in different ways? That selection process concludes with an instructional strategy. The teaching methods that you select will support that strategy.

## INSTRUCTIONAL STRATEGIES AND METHODS

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | b. Methods<br>3. Review Lesson 4, The Adult Learner<br>a. Characteristics of adult learners<br>b. These characteristics should impact your instructional strategy |

1030

b. Methods

A method is a regular, systematic, and detailed way of accomplishing anything. So, your overall strategy is implemented through the use of specific methods.

Some objectives require knowledge acquisition and then hands-on practice, such as the ability to operate a piece of equipment or use a tool. To master these objectives, students require learning events that allow them to operate equipment or use a tool.

Other objectives require knowledge acquisition and perhaps application through simulation. For example, to develop competence in certain instructor roles, you may need to roleplay realistic scenarios or to watch others handle situations similar to what you will experience and then apply what you've learned.

We will present a variety of teaching methods and discuss the advantages and disadvantages of each in relation to cognitive, affective, and psychomotor objectives.

3. Review Lesson 4, The Adult Learner

a. Characteristics of adult learners

- Self-directing
- Experienced
- Ready to learn-motivated
- Problem centered

b. These characteristics should impact your instructional strategy

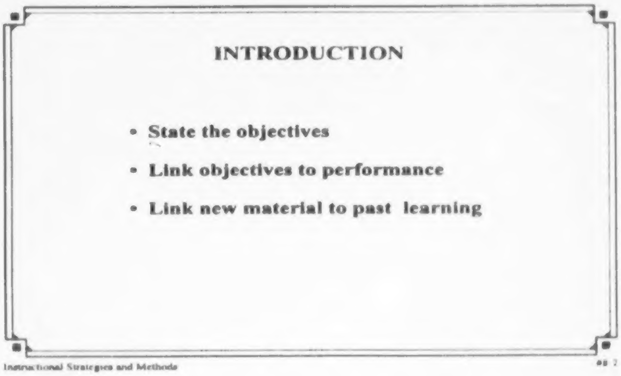
Adults master skills and concepts and react differently in a classroom situation than children. This lesson will help you to develop an instructional strategy and select teaching methods that will meet the unique needs of adult learners.

But before we discuss the various methods, let's review the basic components of any instruction.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|

B. The Parts of Instruction

1. Introduction



**INTRODUCTION**

- **State the objectives**
- **Link objectives to performance**
- **Link new material to past learning**

Instructional Strategies and Methods

a. State the objectives

b. Link objectives to performance

c. Link new material to past learning

*ADDITIONAL INFORMATION*

## B. The Parts of Instruction

While there are a variety of models describing instruction, most models include this sequence: Introduction, Presentation, Practice, and Test.

1. Introduction—a brief but important part of instruction.

a. State the objectives

The introduction begins with telling students what the objectives are. Do this at the course and lesson level. When students know precisely what is expected of them, they are able to focus and achieve.

In this course, certain methods are used to communicate and reinforce objectives. For example, you can prepare an overhead or a flipchart before class. You can post them in the room. You can ask students to read them aloud and ask for questions. And, of course, the objectives should be included in the student materials. Whether you use one or all of these methods, make sure that the objectives are stated and understood.

b. Link objectives to performance

The second part of the introduction is linking the objectives to performance. Sometimes instructors assume that students know why they are working toward the objectives. This is not always the case. Make the connection clear. This gives students a clear sense of purpose.

This should be done at the course, lesson, and individual learning event level. For example, when conducting an activity, the objective(s) *for that event* should be stated and understood.

c. Link new material to past learning

Finally, the introduction relates new learning to past learning (particularly important for adult learners) in several ways. First, during a course with a series of lessons, you may briefly review material from past lessons and show how the new material relates. Or, you may describe the lesson in terms of existing knowledge by using examples or asking students to relate what they are learning to their own experiences.

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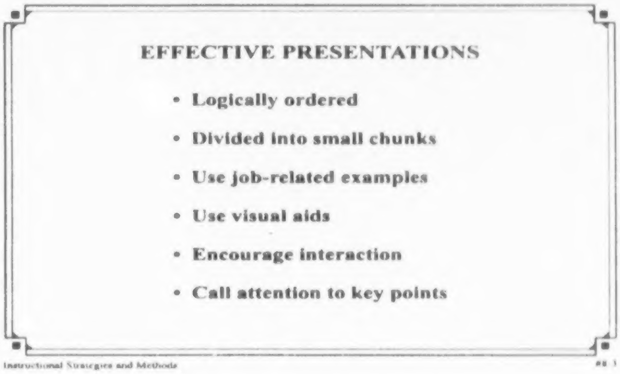
*PARTICIPANT NOTES* | *LESSON PLAN*

2. Presentation
   a. Present the new material
   b. Guidelines for delivering new information



**EFFECTIVE PRESENTATIONS**

- **Logically ordered**
- **Divided into small chunks**
- **Use job-related examples**
- **Use visual aids**
- **Encourage interaction**
- **Call attention to key points**

Instructional Strategies and Methods #8-3

## *ADDITIONAL INFORMATION*

2. Presentation

a. Present the new material

In the presentation portion of a learning event, the instructor presents new concepts, rules, information, processes, and/or demonstrates new skills. From research, we know several things about how to introduce new material most effectively.

b. Guidelines for delivering new information

- Organized and presented in a logical order

  Students learn more from presentations that are logically organized and highly structured. Material can be organized in a number of ways, such as chronologically, or in order of complexity or importance. Generally speaking, topics should proceed from the simple to complex. However, the most important information can be introduced either first or last, depending upon the topic.

  All three learning domains require the logical ordering and presentation of new material. When the material demands movement, or kinesthetic learning, such as the correct way to tango or waltz, you might first demonstrate how to do it "right," so students know what to aim for. Then, you probably should break the entire dance down into small sections or individual movements, as discussed below. Once students have mastered each part, they can more easily pull each element into a cohesive whole.

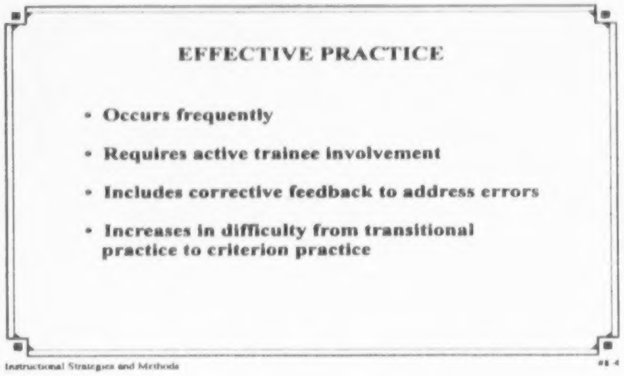
  Some information can be more easily understood by seeing a picture than listening to an explanation, for example, the concepts of symmetry and balance, which are presented in Lesson 9. The organization of visual material is discussed in Lesson 9 as well.

- Break into sections or component parts

  Students learn more from presentations that are delivered in "bite-sized" pieces or relatively small sections.

1037

3. Practice



**EFFECTIVE PRACTICE**

- **Occurs frequently**
- **Requires active trainee involvement**
- **Includes corrective feedback to address errors**
- **Increases in difficulty from transitional practice to criterion practice**

Instructional Strategies and Methods #8-4

a. Absolutely essential for learning

1036

## *ADDITIONAL INFORMATION*

Even smaller chunks are needed in the following situations:

- ☐ When the information is complex or unfamiliar
- ☐ When a group is too large for one-on-one guidance during practice
- ☐ When delivery is rapid

However, the information should still be organized so that closely related ideas or steps in a process are seen as connected and presented accordingly.

- Key points should be highlighted

- New information should be related to past learning, through real-life or job-related examples.

- Instructional aids should be used

  The use of instructional aids is encouraged, as students remember more when they see and hear or see and do, rather than when they simply listen to a lecture, for example.

- Provide opportunities to interact

  Lecture presentations should be interspersed with many opportunities for interaction through the use of questions, discussion, practice, and activities. This ensures that learners are involved; consequently, they are more likely to absorb, process, and apply new material as it is presented.

3. Practice

a. Absolutely essential for learning

Practice is absolutely essential for learning. A skill that is not mastered during training is unlikely to be mastered, remembered, and used later. Ideally, practice should occur frequently and immediately after the presentation of relatively small chunks of material. The most effective practice requires active student involvement.

PARTICIPANT NOTES

LESSON PLAN

b. Errors should be corrected every time, right away

c. Types of practice

d. Transitional practice

    (1) Simplify early practice

    (2) Maximum guidance in early practice, gradually decreasing

1033

*ADDITIONAL INFORMATION*

b. Errors should be corrected every time, right away

Initial practice should be simple enough to reduce the risk of error. When errors occur, don't be afraid to correct them, every time, and right away. Once a student practices something incorrectly, it will be much harder to perform correctly. Trial and error practice is generally not effective.

c. Types of practice

Practice can be included in your lesson plan in several ways. For example, during a short pause in a presentation, the instructor could ask students to think through a response or to picture themselves performing an activity. This is sometimes called covert, or non-observable practice. Observable, overt, practice can range from a simple response to a question to a team activity demonstrating a complex procedure learned during the course of a 5-day workshop. Culminating exercises that demonstrate mastery of a broad area of course content are important in assessing overall mastery, but they should always be preceded by opportunities to practice smaller units of material. These opportunities are called *transitional practice*.

d. Transitional practice

Transitional practice helps trainees move from the skill level they have when they begin the course to the level of competence required for successful completion of the course. There are several ways to simplify early practice.

(1) Simplify early practice

(2) Maximum guidance in early practice, gradually decreasing

The instructor provides maximum guidance in the beginning of practice. This guidance can be in the form of corrective feedback, a cue about the type of answer you're looking for, an example of a similar situation, or even a review of the relevant material before practice begins. Guidance increases the likelihood of correct performance.

As the student gains confidence and competence, guidance should decrease accordingly. Final practice should be unguided attempts to perform under the same conditions as evaluation will occur. This is called *criterion practice*.

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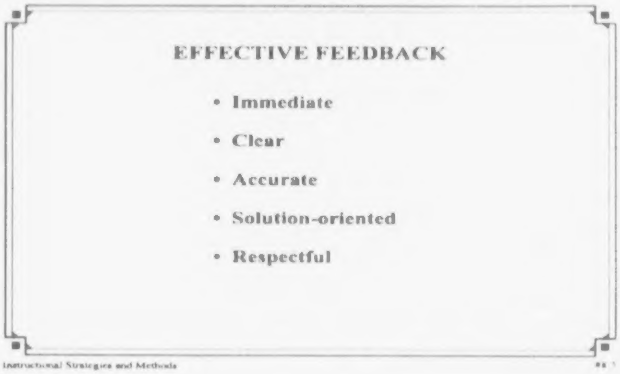
*PARTICIPANT NOTES* | *LESSON PLAN*

e. Feedback



**EFFECTIVE FEEDBACK**

- Immediate
- Clear
- Accurate
- Solution-oriented
- Respectful

Instructional Strategies and Methods

4. Test

   a. Final, unguided evaluation

   b. Conditions of performance

   c. The criterion is the standard set by the objectives

1040

## *ADDITIONAL INFORMATION*

e. Feedback

Feedback is given throughout all practice. Your feedback should be immediate, clear, and accurate. If the exercise has been performed correctly, provide positive reinforcement. If there are incorrect areas of performance, begin by reinforcing positive aspects. Then use corrective feedback to guide the student into a more accurate response.

4. Test

a. Final, unguided evaluation

A test is final, unguided performance of the learned skill by a trainee.

b. Conditions of performance

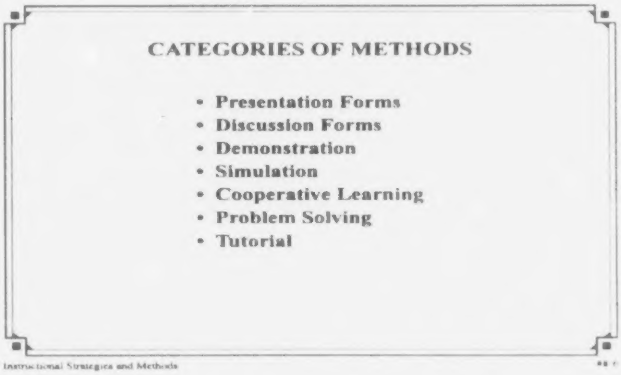
Tests are performed under conditions as close to those on the job as possible and should match those set forth in the objectives.

c. The criterion is the standard set by the objectives

*PARTICIPANT NOTES* | *LESSON PLAN*

C. Teaching methods

1. Using a variety of methods enhances instruction
2. The media, the message, and the methods
3. Categories of methods



**CATEGORIES OF METHODS**

- **Presentation Forms**
- **Discussion Forms**
- **Demonstration**
- **Simulation**
- **Cooperative Learning**
- **Problem Solving**
- **Tutorial**

Instructional Strategies and Methods

*ADDITIONAL INFORMATION*

C. **Teaching methods**

1. Using a variety of methods enhances instruction

You will generally use several teaching methods during the presentation of a lesson. Familiarity with a number of techniques allows you to select the best method for a particular objective, maintain the group's interest, and to reach different types of learners.

2. The media, the message, and the methods

It is helpful to distinguish between *what* must be communicated in an instructional setting—the message—and the vehicles that are used to get the message across—the media and the methods. Instructional media are carriers of information, e.g. printed materials, slides, films, etc. Instructional methods are those procedures of instruction that are selected to help learners achieve objectives, that is, to understand and apply the message. Lesson 9, Design and Use of Media, will provide you with details about instructional media; this lesson presents a variety of instructional methods.

3. Categories of methods

Presented here are seven categories of instructional methods, each with more specific applications. Refer students to Appendix B, Handouts/ References, for a matrix of these methods which includes: definition, most appropriate use, advantages/disadvantages, and information about how to instruct using each method.

*PARTICIPANT NOTES*

*LESSON PLAN*

a. Presentation forms, including lecture
   - Lecture
   - Reading assignments

b. Discussion forms
   - Structured inquiry
   - Discussion
   - Small group discussions

c. Demonstration

## *ADDITIONAL INFORMATION*

a. Presentation forms, including lecture

A presentation occurs when a source disseminates information. The source could be a lecturer, an audiotape, a filmstrip, or even a textbook. It is one-way communication, typically controlled by the source. For example, as part of a museum tour, you might check out a tape player with headphones. The audiotape and accompanying map guide you through the exhibits and present information about each display. Although you could stop and rewind the tape, there is no opportunity to question the source and clarify the message.

- Lecture
- Reading assignments

b. Discussion forms

Discussion involves interaction between the source and the learners. This interaction makes a significant contribution to the learning process. It is useful from the point of view of the instructor, because it is one way of assessing the knowledge, skills, and experience of the group. From the student's perspective, discussion greatly enhances the processing, retention, and application of the content. The discussion method also establishes a cooperative, collaborative learning environment, essential for adult learners.

- Structured inquiry
- Discussion
- Small group discussions

c. Demonstration

A demonstration show a process to be learned or the way something works. The objective might be for the student to imitate how to do what is demonstrated, to simply show how something works, or for the student to adopt the attitudes and values illustrated in the modelled behavior. On-the-job training can be a form of demonstration which allows question and answers between an experienced worker and a newcomer. A job aid for evaluating demonstrations is included in Appendix B.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | d. Simulation<br>■ Roleplays<br>■ Experiential learning<br>■ Field trips<br>e. Cooperative learning<br>■ Brainstorming<br>■ Team development<br>■ Small group projects<br>f. Problem solving<br>■ Case studies and critical incidents<br>■ Games<br>■ In-basket exercises |

1046

ADDITIONAL INFORMATION

d. Simulation

Simulation methods provide an approximation of real-life situations, thereby offering realistic practice and/or exposure to on-the-job conditions without the expense or risks otherwise involved. Interpersonal skills and laboratory experiments are popular subjects for simulations.

- Roleplays
- Experiential learning
- Field trips

e. Cooperative Learning

A primary advantage of cooperative learning is that these methods more closely approximate the working environment, in which employees rely on one another to accomplish goals. A growing body of research indicates that students learn from each other as they work in teams.

- Brainstorming
- Team development
- Small group projects

f. Problem solving

Presenting students with challenging problems is a teaching method which stimulates thought, utilize higher level thinking skills, and encourages intense participation. Some of these methods are better for some content than others. For example, games are frequently employed in business schools to develop decision-making skills. Teams work together to address the problems of a mythical company.

- Case studies and critical incidents
- Games
- In-basket exercises

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| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | g. Tutorial<br>■ Computer-assisted instruction<br>■ One-on-one instruction<br>D. Methods to enhance learning transfer<br>1. Exercises |

1043

g. Tutorial

Tutoring is most often done on a one-on-one basis, but the source can be a computer, an instructor, learning lab personnel, or another student. The hallmarks of tutored instruction include the presentation of material, student responses, and feedback regarding accuracy. Tutors provide practice until the learner can demonstrate competence.

- Computer-assisted instruction
- One-on-one instruction

**D. Methods to enhance learning transfer**

Learning transfer occurs when a student is able to apply the concepts and skills learned in a training environment to on-the-job practices. Learning transfer is enhanced when retention is increased; obviously things remembered can then be applied. The instructional methods and media that you choose have an impact on retention and transfer. It has been pointed out that the use of visual aids, frequent practice, and breaking information into small yet cohesive sections increases retention. The use of instructional methods that reproduce on-the-job conditions as closely as possible has been shown to greatly enhance learning transfer. For example, case studies, in-basket exercises, and roleplay activities.

1. Exercises

The more closely training is related to actual job performance, the more effective the training will be. In the introduction, link objectives to on-the-job tasks. In the presentation, use examples from the work environment. Draw on your own experience to enhance the presentation's relevance. Be cautious, however, of "war stories." It is easy for students to become distracted by interesting stories; examples should always support the lesson objectives.

Practice and testing should focus on those skills that will be used in work performance, and conditions should simulate those on the job as closely as possible.

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*PARTICIPANT NOTES* | *LESSON PLAN*

2. Job Aids
3. Action Plans

E. Activity 8.1—Decide on Your Methods

1. Work individually
2. Refer to the EMT-Basic lesson assigned for final presentations
3. Determine the instructional methods that will best help students attain the lesson objectives

## *ADDITIONAL INFORMATION*

2. Job aids

Job aids are written guides for on-the-job use. They often come in the form of checklists, steps for a procedure, or visual identification aids. Participants may follow the job aids during a presentation, use them as part of an exercise, or have them handed out at the end of a course.

3. Action plans

Action plans aid the transfer of learning by helping trainees to think through applying new skills or knowledge in a job situation. Action plans range from relatively simple forms that can be completed in a 15-minute exercise, to complex plans, developed by work teams that can take a half-day or whole-day session. Long-term action plans are completed during the course; participants commit to taking action within a specified period of time, say within a few months.

A good follow-up to the long-term action plan: the instructor can have participants write a letter to themselves during class that details what they plan to do on-the-job with the information they're learning. Then in 3 to 6 months, the instructor has a stack of letters to mail to participants which will remind them to apply their new skills and gives them the opportunity to evaluate how well they've done that so far.

**E. Activity 8.1—Getting Started—Decide on Your Methods**

Students will determine the best fit instructional strategies, given the objectives and the evaluation plan they developed in Lesson 6 and 7. Encourage them to refer to the matrix of Instructional Methods included in Appendix B. If possible, recruit assistant instructors to help you give some one-on-one guidance to students during this activity.

*PARTICIPANT NOTES* | *LESSON PLAN*

## II. Instructor Skills

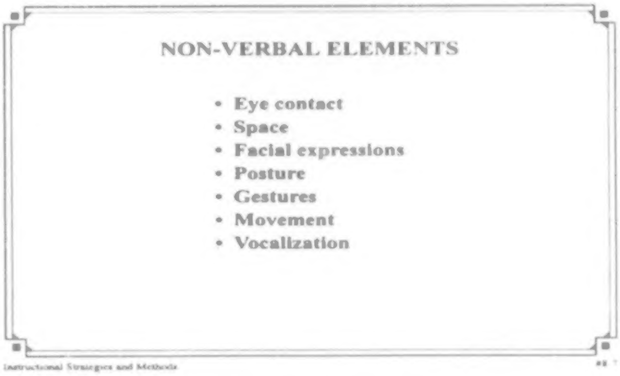
A. Preparation

B. Communication skills

1. Classroom settings and one-on-one interactions

2. Giving instructions

3. Non-verbal elements of communication



NON-VERBAL ELEMENTS

- Eye contact
- Space
- Facial expressions
- Posture
- Gestures
- Movement
- Vocalization

Instructional Strategies and Methods

## II. Instructor Skills

In this section, you'll have an opportunity to practice and refine your instructor skills.

### A. Preparation

Preparation is critical to effective instruction. Review the content of a course thoroughly. If you have not taught a course before, allow yourself plenty of time to examine each lesson. If you have questions, get them answered. It is more difficult to train effectively when you are unfamiliar or uncomfortable with the material.

It also is helpful to understand the overall structure and organization of the course you are going to deliver; that is, to get the big picture as well as the details. Get an idea of how each section builds on and relates to the others, and how to best use the materials to achieve the course goals. More specifically, review the sequencing of lessons, note all of the activities, and make sure you have the necessary materials and supplies.

### B. Communication Skills

1. Classroom settings and one-on-one interactions

As instructors, we are most often faced with a room full of students. Sometimes, however, we are in settings that involve guided practice, individual tutoring, and other forms of one-on-one contact. We will discuss communication skills that are needed in both classroom settings and during one-on-one interactions.

2. Giving instructions

3. Non-verbal elements of communication

Non-verbal elements of communication have been found to influence perception and contribute to a feeling of trust even more than the spoken word. Gestures and facial expressions convey interest, sympathy, understanding or confusion, affirmation and agreement, or disapproval. Being aware of these non-verbal elements can help you to build trust and to establish rapport quickly.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | a. Eye contact<br>(1) Speakers tend to use three kinds of eye contact<br>■ Direct<br>■ Scan<br>■ Room thirds |

a. Eye Contact

Maintain appropriate eye contact. Good eye contact helps to establish your credibility. It engages participant attention and interest. When you look directly at a student, s/he will feel that you are speaking to them personally. Eye contact helps you to "read" your audience; you can more accurately gauge interest level, comprehension, the time needed to complete an activity, and whether it's time for a break.

(1) Speakers tend to use three kinds of eye contact

- Direct

  The speaker focuses on one person for several seconds or for an entire sentence. This type of eye contact captures a participant's attention and gives you a chance to study them. Use direct eye contact with several participants around the room and draw in the whole audience.

- Scan

  The speaker makes eye contact with each person briefly and includes everyone. A scan gives you a quick "read" on the audience. This is particularly useful after your attention has been diverted to adjust a transparency or distribute materials.

- Room Thirds

  If you tend to focus on just a couple of people or one section of the room, it can be helpful to mentally divide the room into thirds and then deliberately make eye contact with participants in each section. This will help you to avoid the common mistake of making contact with only the friendliest, most interested faces. If you are nervous, it can help to make contact with the friendly faces. But, if you stick with those alone, you will lose the opportunity to draw in the rest of your participants.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | (2) Cultural differences in making eye contact<br>b. Space<br>c. Facial expressions<br>d. Posture |

1056

*ADDITIONAL INFORMATION*

(2) Cultural differences in making eye contact

Be sensitive to unique cultural tendencies regarding eye contact. For example, some cultures consider direct eye contact while both speaking and listening to be a sign of interest. In other cultures it is considered more attentive to drop or avert the eyes while listening, showing earnest concentration.

b. Space

Space can relate to power. Be sensitive to perceptions; a large desk between you and your student may be seen as a barrier, while being too close may seem intimidating, particularly if you tower over your student. Be aware of space when you communicate and create an open, receptive, and non-threatening environment.

NOTE: There are cultural differences regarding space as well. "Personal space" is the distance we like to keep between ourselves and others. Except for intimates, we will feel invaded when "our space" is breached. Ranges for personal space tend to be larger for men than for women; and in certain cultures, the space requirement is minimal. The feeling of continually wanting to move away from or closer to the other is the likely result of this intercultural disparity.

c. Facial expressions

Facial expressions are perhaps the most powerful non-verbal element of communication. Be sure to give clear non-verbal signals, such as nodding your head in agreement, smiling your approval, or looking perplexed when you have a question. These expressions help to preserve the "give-and-take" dynamic of conversation which are necessary to shared understanding.

d. Posture

An "open" body posture is one in which your arms lay casually at your side, or rest on a surface. Leaning forward conveys an eagerness to hear the next word. The best stance for training is solid and comfortable. Feet are shoulder-width apart, arms at sides, expression relaxed with an open, friendly manner. With this body posture, you will look confident, in control, and ready. You'll also be able to move easily and use your arms to gesture.

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| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | e. Gestures<br>f. Movement<br>g. Vocalization<br>■ Vary volume, pitch, speed, and tone<br>■ Pause naturally |

1053

*ADDITIONAL INFORMATION*

e. Gestures

Another important part of non-verbal communication is gesturing. During a presentation, use gestures would feel natural in an exciting or important conversation. Gestures that you commonly use will be more comfortable for you and they won't appear artificial to your audience. However, remember that gestures need to be "bigger" than they are in normal conversation. Audiences have a difficult time seeing small or waist-level gestures and tend to interpret this type of movement as nervousness.

f. Movement

Avoid rocking or pacing; they will distract from your presentation. Take steps! Firm, purposeful movement will enhance your presentation.

Moving toward your audience has a powerful impact; use movement deliberately to emphasize important points.

g. Vocalization

- Vary volume, pitch, speed, tone

  Vary your volume, pitch, speed and tone. If you speak softly, imagine speaking to the back of the room. This will help you to project your voice; participants become frustrated when they cannot understand the speaker. Focus on WHAT you are saying and your voice will reflect your message.

- Pause naturally

  Pauses are a natural part of how we use our voices and should be used during your presentation. They are effective before beginning to focus a group's attention, to emphasize an important point, and to invite reflection. Pause after you ask a question or solicit input. Some trainees will need time to formulate a question or an answer. Do not assume silence means no one is going to respond. Count to ten (slowly) after you've asked for a response.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | 4. Confirming responses<br>- Direct acknowledgement<br>- Clarifying response<br>- Positive response<br>- Supportive response<br>- Constructive disagreement |

1000

*ADDITIONAL INFORMATION*

4. Confirming responses

During conversations, listen attentively. Use what are known as *confirming* responses. Confirmation involves acknowledging the other's communication by responding relevantly in such a way that accepts their experience, whether you agree with them or not. Confirming responses also suggest a willingness to become involved with the other person. Include both non-verbal and verbal elements. We'll discuss each type in detail.

- Direct acknowledgement—a confirming response that enables the speaker to know that what was said has been heard and understood. For example, "Yes, I understand what you mean."
- Clarifying responses ask for more information.
- Positive response—expressing your genuine positive reaction is appropriate and welcomed by the student.
- Supportive response—supportive responses demonstrate care and consideration for another's circumstances or point of view. This may include a declarative statement of intention to act on their behalf, or simply an empathetic word of encouragement.
- Constructive Disagreement

  Disagreement can occur between you and your students, but keep the focus on the content rather than the individual. Find something to agree with in the ideas, opinions, and beliefs of your student, even if it is merely to say that you share a concern about the issue. Refer to the section on *constructive feedback* in Lesson 2, Instructor Roles and Responsibilities.

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*PARTICIPANT NOTES* | *LESSON PLAN*

5. Disconfirmation
   - Irrelevant or tangential
   - Impersonal or impervious
   - Incongruent verbal and nonverbal messages
6. Activity 8.2—Active Listening Roleplay
   a. Form pairs
   b. Given scenario cards, roleplay active listening responses
   c. Obtain feedback from your partner

*ADDITIONAL INFORMATION*

5. Disconfirmation—a roadblock to communication which alienates the two communicators.

   - Irrelevant and tangential response

     One form of disconfirmation is a response that is irrelevant or tangential. These off-topic replies say, "What you are saying is not important; I want to talk about what matters to me." For example, when the little boy says to his mom, "Look, Mom. I found a snail" and the mother answers, "Go wash your hands."

   - Impersonal or impervious response

     Impersonal or impervious responses are also disconfirming; here the message is "You don't matter" or "I don't want to get too close to you." These can be cloaked in inappropriate humor; sarcastic comments are usually disconfirming.

   - Incongruent verbal and non-verbal messages

     Each of us "speaks" with a distinct body "language" just as surely as we speak with words. In fact, research indicates that when verbal and non-verbal messages appear to contradict one another, people tend to believe the non-verbal message is more accurate. This type of incongruency is disconfirming as well. For example, if you smile while you tell students that the class as a whole is doing very poorly, students will be perplexed.

6. Activity 8.2—Active Listening Roleplay

   Refer to Appendix A. The class should break into pairs and choose one person to play the student and one person to play the instructor. The "student" refers to the scenario cards to start the roleplay. The "instructor" applies the principles of active listening as they respond to their partners. This roleplay gives participants the opportunity to practice the three types of feedback discussed in Lesson 2 and to put to use the communication skills just discussed.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | C. Questioning techniques<br>1. Setting expectations<br>2. Make your request clear |

## C. Questioning techniques

In a typical classroom, the instructor does most of the talking. This approach is not the most effective way to stimulate learning. The skillful use of questions will facilitate participation and create a more dynamic learning environment.

Encourage participants to ask questions; think of questioning as a window of opportunity for real learning to occur. If you have a quiet group, break the ice by asking for a show of hands in response to a simple question. This can get things moving.

1. Setting expectations

Let the group know at the beginning of your presentation that you will be asking and accepting questions throughout the course presentation.

2. Make your request clear

Make it clear what you are asking for. Do you want a list of items, a brief summary, a description, an example? Also, make your purpose clear; relate the question to the learning.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | 3. Purpose of questioning<br>a. Assessment<br>b. Drawing out participants—use notecards<br>c. Eliciting discussion or increasing accountability<br>d. Increase retention |

1066

*ADDITIONAL INFORMATION*

3. Purpose of questioning

a. Assessment

In this course, you will find that questions are often used to appraise the background knowledge of the group or to assess how well students are processing and applying the information that is being presented. A question is posed, the group provides answers, and the instructor documents them on the flipchart or board. The instructor then completes or fills in missing points. When using these types of questions it is important that the instructor screen the answers and only document on the flipchart those answers that are correct. Otherwise, the participants who are taking notes will write down incorrect information.

b. Drawing out participants—use of notecards

One very effective technique when dealing with a group who may be intimidated by the speaker, or when the material is particularly complex, is the use of note cards. pass out a 3x5 card at the beginning of the session (not the course) and ask everyone to write down one good question before the next break. Then, discuss the questions directly after the break.

c. Eliciting discussion or increasing accountability

It is also appropriate for instructors to direct questions to the participants. Questions directed to the group at large may elicit a good discussion; questioning an individual serves to increase accountability and therefore attention to course material.

d. Increasing retention

Research indicated that as learners make connections between new information and their own knowledge, retention increases. Some questions are more effective at generating the reflection, processing, and connections necessary o learning than are others. The two major categories are open- and close-ended questions. Open-ended questions solicit more feedback and interaction. Closed-ended questions are useful to control talkative participants and to bring closure to key points.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | 4. Question and answer sessions<br>a. Prepare—anticipate questions<br>b. Prime the pump<br>c. Keep to the point and be brief<br>d. Don't worry if you don't know the answer<br>D. Use of humor |

1069

4. Question and answer sessions

Question and answer sessions allow you to address specific concerns of your group, to clarify your main points, and to learn from the audience.

a. Prepare—anticipate questions

Preparation will help you. Try to anticipate the kinds of questions your audience will ask as you go through the lesson plan. If you have trouble, ask someone who has taught the course before.

b. Prime the pump

During a question and answer session, let the group know what kinds of questions are appropriate. When you have opened the session up for questions, allow the group some time to come up with a questions. Try to become comfortable with a pause. If you still don't get a question, you may ask a question yourself. "I was wondering how this applied to your specific situations..."

c. Keep to the point and be brief

d. Don't worry if you don't know the answer

Do not worry if you don't know the answer. You can throw the question out to the audience and let them share their experience, offer to find the answer to the question (make sure you follow up if you do), or state that the question is outside of the scope of the presentation (if it is). Use active listening to clarify unclear questions. Break complex questions down into parts. If a question seems hostile, the best approach is to ignore the hostility and focus on the question. Deal with the hostility privately if it appears to be a problem.

### D. Use of humor

Humor is important in training; it can add interest, reduce tension, and increase group identification. Humor should be both effective and appropriate. Humor should support the objectives of the course, not dominate the course or sidetrack the group. Humor is never the point, always a method. Humor should always be used appropriately. Be aware of, someone who could be hurt or offended by what you may be saying, or reflecting poorly on the EMS. Self-

*PARTICIPANT NOTES* | *LESSON PLAN*

E. Activity 8.3—Mini-Presentations

1. Refer to Activity 8.3 in Appendix A and prepare individually

2. Use the Presentation Checklist in Appendix B as you observe each presentation

3. Relax and enjoy the practice

1070

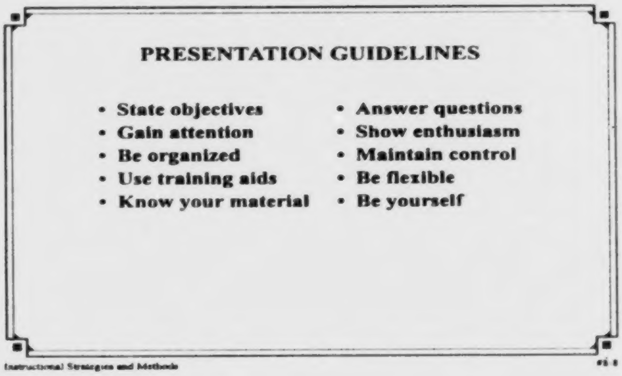
deprecating humor is generally the safest, although too much of it may injure your credibility with the group.

### E. Activity 8.3—Mini-Presentations

Refer to Activity 8.3 in Appendix A for details about this exercise. Be sure to use the presentation evaluation forms to familiarize students with their use prior to the final presentations and allow practice in observation and scoring. This exercise should provide feedback to students about things they may want to work on and serve as an interim evaluation.

F. Facilitation

G. Presentation guidelines



**PRESENTATION GUIDELINES**

- State objectives
- Gain attention
- Be organized
- Use training aids
- Know your material
- Answer questions
- Show enthusiasm
- Maintain control
- Be flexible
- Be yourself

Instructional Strategies and Methods [illegible]

1072

*ADDITIONAL INFORMATION*

## F. Facilitation

Facilitation is the art of managing a process among participants. Facilitation is generally used during group discussions or processes to help the group work together to find solutions. Successful facilitation tries to make itself obsolete by providing groups with the skills to manage itself. Facilitation relies on active listening, close observation of group dynamics, and restraint. It can be tempting to jump in and solve a group's problem or point out where the group should be going. Good facilitators give groups room to test out ways of working together. Ground rules agreed on by the small group will help them to manage their own processes.

Refer to Lesson Two, Instructor Roles and Responsibilities, for more information about facilitation skills.

## G. Presentation Guidelines

1. State objectives

Let participants know what they should expect to get out of the instruction. Continue to reference these objectives throughout your presentation. This helps students to mentally organize the material you are presenting. It also increases student satisfaction when it becomes clear that the stated objectives were met.

2. Gain the student's attention

Many methods may be used to gain the student's attention, e.g., telling a relevant anecdote, posing a unique situation, or asking how they would solve a problem. Once you have gained their attention, you must then maintain it throughout the entire lesson. After about 15-20 minutes of presentation, it is essential that the student be reinvolved in the learning process. Use the various instructional methods described earlier in the lesson, such as questioning, brainstorming, or demonstration to keep students active in the learning process.

3. Be organized

Present material in a logical sequence, building from foundational concepts. Have the necessary materials at your fingertips.

1073

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | |

*ADDITIONAL INFORMATION*

4. Use training aids

   People learn better when more than one sense is stimulated. By using pertinent, well-designed aids, comprehension and retention will be enhanced. In addition, multimedia materials add variety to the learning experience.

5. Know your material

   This item is important. Your credibility and student attentiveness go hand in hand.

6. Answer questions

   This has two parts. First, always respond to student questions, even if they seem irrelevant. Never ridicule. If a question appears to be out of scope, say something like, "Let's see how this relates to what we've been discussing." If a question is too broad or tangential to the discussion, it may have to be deferred. When you have responded to a question, make sure you were on target and complete.

   The second part is the reality check. Get an accurate read on the effectiveness of your presentation by asking questions of the students. Direct questions to students at times. This forces participants to process the material and put it to use, and lets you evaluate individual comprehension. Give the student time to think through the question and come up with an response before you jump in and answer it yourself.

7. Show enthusiasm

   Be enthusiastic about the material and enthusiastic in your delivery.

8. Maintain control

   It is your responsibility to target objectives and keep the discussion on track.

9. Be flexible

   Being well-prepared means you have an outline and follow it. However, the needs of your students may require flexibility in timing and instructional strategies.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
|  | **III. Summary** |
|  | **References** |

10. Be yourself

You may admire certain speakers for their flair or competence. Don't try to imitate them; it doesn't work. Instead, try talking to students as if they were your neighbor or friend. This can help you to relax and make your delivery more effective.

## III. Summary

This lesson presented an overview of instructional strategies and methods, their advantages, disadvantages, when to use them, and how to use them. It also addresses instructor skills, such as effective communication, questioning, and presentations, and provides students the opportunity to practice those skills.

## References

Instructional Systems Design (ISD) Job Aids. The U.S. Office of Personnel Management, Developed by Human Technology, Inc., McLean, Virginia, July 1990

HUD Mentoring Program Train-the-Trainee Guide, Developed by ASA, April 1995

Understanding Instructional Systems Design, ASA, November, 1992

Glasgow, Z., Seels, B. (1990). Exercises in Instructional Design. Columbus: Merrill Publishing

Slavin, Robert E. "Research on Cooperative Learning: Consensus and Controversy," Educational Leadership: 52-54, December 1989-January 1990

Heinich, Molenda, and Russell (1993). Instructional Media. New York: MacMillan Publishing

# DESIGN AND USE OF MEDIA

## 9

Training Delivery Options ◄
Media Selection ◄
Principles of Design ◄
Teaching Aids—Prepared and Spontaneous ◄
Getting Started—Design Your Own Teaching Aids ◄

# MEDIA

## *OVERVIEW*

**Suggested instructional time for this lesson:** 1.5 hours

### Introduction

This lesson presents different media options to incorporate into your lesson presentation. You will learn what media is available, how to select and design appropriate media, and be given information about different types of equipment.

### Lesson Objectives

Through group discussion, question and answer sessions, and small group activities, the EMS instructor trainee should be able to:

- List four steps in the media selection process
- List three purposes of media decisions
- Select appropriate media to achieve instructional objectives
- List five components of a lecture box or AV tool kit

### Materials Needed

- Overhead projector and screen
- Flipchart (prepared objectives)
- List of media resources
- Blank transparencies, markers
- Sample demonstration props, posters
- EMT-Basic Lesson

### Instructional Strategies

- Lecture
- Discussion
- Question and answer
- Visual Aids
- Demonstration (if needed)
- Practice (if needed)

### Audiovisual Equipment (optional)

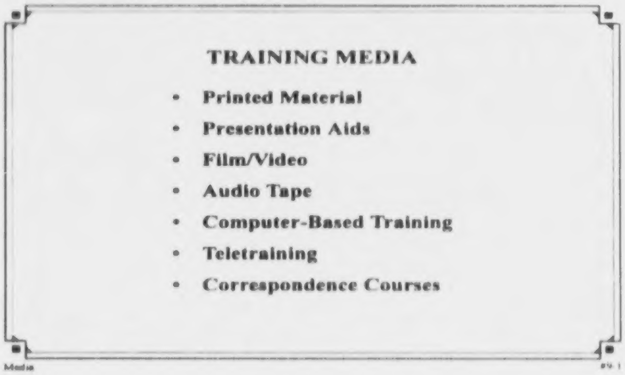
- Slide projector/slides
- Film projector/film
- Laser pointer
- LCD Display panel
- TV/VCR and videotape
- Video camcorder
- Audiocassette player/tape
- Computer generated projection equipment/demo

*This audiovisual equipment is optional and should be provided and/or demonstrated dependinb availability and the needs of the students.*

*PARTICIPANT NOTES* | *LESSON PLAN*

## Lesson Objectives

## I. Training Delivery Options



**TRAINING MEDIA**

- **Printed Material**
- **Presentation Aids**
- **Film/Video**
- **Audio Tape**
- **Computer-Based Training**
- **Teletraining**
- **Correspondence Courses**

Media

## *ADDITIONAL INFORMATION*

### I. Training Delivery Options

One of the most interesting and challenging decisions in the instructional design process is the selection of the medium or media to use to deliver the instruction. Over the last ten years, the options for media used for training purposes has increased significantly. A variety of high-end, technology-based training media are available. However, "high-tech" does not mean better. Appropriate media are determined by a number of factors which must all be considered for "best fit" solutions.

**Classroom instruction** (instructor-led) is comprised of standard instructional techniques, such as lecture and slide presentations, which can be enhanced by employing some of the instructional strategies you learned about in Lesson Eight. The primary advantage of instructor-led training is face-to-face interaction. Disadvantages include travel costs to delivery sites, accessibility to a far-flung student population, and course standardization. Standardization is affected primarily by differences in individual teaching styles and experience levels.

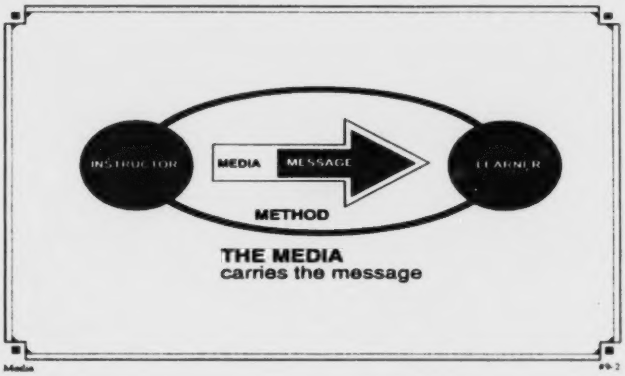
**Teletraining** is delivered as a video broadcast to remote locations via satellite. Basic teletraining involves transmitting a presentation, either live or taped, to remote locations with one-way audio and video. Student responses are typically mailed. Teletraining systems are becoming more sophisticated and increasingly simulate a regular classroom environment. Instructors are viewed on large screen televisions, and two-way audio (each student has a microphone) is common. Hand-held devices allow students to input simple responses, or to signal a desire to ask a question or provide a comment. Sometimes instructors will hold on-line office hours or, by using Bulletin Board Service (BBS), instructors can post questions and hold on-line discussion groups.

**Computer-Based Training (CBT)** provides self-paced, individualized training using a computer to deliver the instruction. CBT can be designed to accommodate students of varying experience levels. Although substantial development costs are typical, CBT provides standardized instruction that proves cost-effective when used repeatedly by large numbers of students in many locations. Another computer-based training option involves fully equipped learning resource centers, which enable instructors to present material to students seated at workstations around the room via a networked client-server system. Depending upon the design, students can work

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|

## II. Media Selection

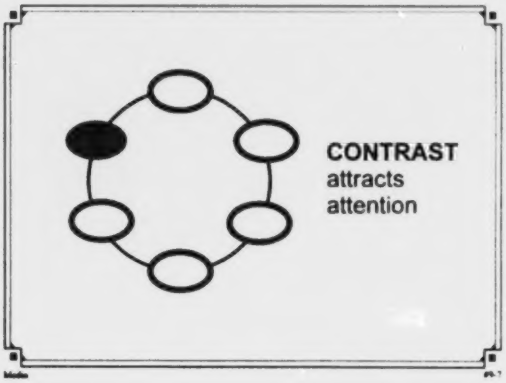
A. Media, Methods, and the Message


INSTRUCTOR
MEDIA
MESSAGE
LEARNER
METHOD
Media
#9-2

**THE MEDIA**
carries the message

B. The purpose of media decisions

1. Emphasize



**CONTRAST**
attracts
attention

1082

individually or as a group, using the networked system. This is used most often in training on computer software.

**Correspondence courses** also provide self-paced instruction. Correspondence courses are typically paper-based but can include CBT and video components. If students have questions, there is generally an instructor or designated subject matter expert who can be reached via telephone or mail. Correspondence courses are excellent for teaching students in remote areas. However, students do not have the advantage of face-to-face time with the instructor or sharing knowledge with other students.

## II. Media Selection

### A. Media, Methods, and the Message

The word media is derived from a Latin word meaning "between" and refers to anything that carries information between a source and a receiver—for our purposes, the instructor and the student. We're differentiating here between the media that carry the message, the message itself, and the methods used. The message is the course content. The instructional methods are the context in which the message is communicated—those processes that the instructor selects to help learners achieve the course objectives.

Instructional media are selected to help students understand the message. They facilitate communication by making the content more easily understood.

### B. The purpose of media decisions

1. Emphasize

A primary concern of the instructor should be to ensure that visual cues guide students to important concepts and make essential material stand out. This can be accomplished through the use of headings, wide left margins with limited text, boldfaced headings, italics, and larger typeface. A tip: underlining text is not recommended; it has little impact on retention and interferes with the student's own processing and categorizing of the information. Emphasize important ideas; don't force the reader to search for key points. Refrain from using capitals to highlight because they are difficult to read; capitals can be used effectively in short headings.

*PARTICIPANT NOTES* | *LESSON PLAN*

2. Organize
3. Clarify

## ADDITIONAL INFORMATION

2. Organize

Use visuals to present material in an organized manner to students. Provide diagrams and flow charts of sequential steps if appropriate. Research indicates that adult learners benefit from an exercise in which they are given printed material and then are asked to generate their own "graphic organizer." This could be a simple outline, labelled clusters of circles, flow charts, graphs, etc.

Effective organization of material is essential to learning. Material should be reviewed to determine if there is a clear focus to each section. In terms of writing style, start all sections with an introduction, and all paragraphs with a topic sentence. Label text so that readers can locate the information they need.

3. Clarify

A prime instructional objective is clarity; it is the cornerstone of understanding. The media you choose should clarify difficult concepts. For example, the use of a pig heart dissection when discussing the cardiovascular system clarifies concepts that may be difficult to understand with words alone. Remember back to the "apple" exercise in Lesson 4. Symbolic representations of concepts, such as words, are not as effective at getting the point across as the real thing.

To be sure that your teaching aids aren't confusing, follow these rules:

- Keep your writing style simple
- Provide ample white space
- Highlight important ideas with color, boldface, or italics
- Use a typeface that is easily read
- Eliminate hyphens
- When using technical terms, include definitions
- Always spell out acronyms on first use, and again for new sections

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
|  | C. Factors that affect media decisions<br>1. Resources of the training site<br>2. Expertise and production capabilities<br>3. Flexibility, durability, and convenience<br>4. Cost effectiveness |

1086

*ADDITIONAL INFORMATION*

## C. Factors affecting media decisions

Practical considerations will always be a factor in media selection.

1. Resources of the training site

An important factor in media selection is the projected availability of various media in the environment in which the instructional package will be used. If the materials will be used in the learning resource center of a public school, community college, or university, then a whole array of media devices will probably be available. However, if the package is designed for home study or use in a community center where this equipment is not likely to be available, then you must either find a way to make the equipment available or limit yourself to paper-and-pencil types of instructional materials.

2. Expertise and production capabilities

The ability to manage the media which you incorporate in the instructional package is also a concern. There is a "learning curve" that must be factored in if you choose unfamiliar equipment. The ease and costs of production are also factors.

3. Flexibility, durability, and convenience

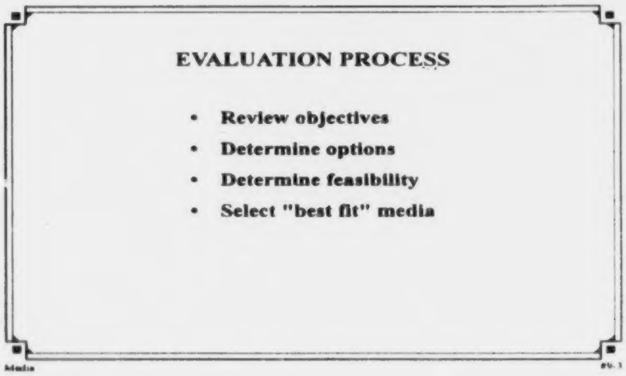
The flexibility, durability, and convenience of the materials are other factors. Is the equipment found only in a learning center, and is there a learning center available? Is it open during hours when students can use it for independent study? Are the materials and equipment transportable?

4. Cost effectiveness

Another factor is cost effectiveness. This should be evaluated over the term of expected use, for one medium compared to others. Some materials may be initially more expensive to produce in one medium than another, but these costs may be equalized when you consider how the costs will be amortized over a large number of students or a long period of time. It might be cheaper to videotape a presentation for a large group of students to view again and again as needed, which frees the instructor to work with small groups of students or to help individuals solve problems.

*PARTICIPANT NOTES* | *LESSON PLAN*

D. The media selection process



**EVALUATION PROCESS**

- **Review objectives**
- **Determine options**
- **Determine feasibility**
- **Select "best fit" media**

Media

## Media Design III.

A. What are design elements?

1. Definition
2. Instructional value

ADDITIONAL INFORMATION

### D. The media selection process

The media selection process should be rooted in the course objectives. Some media are more effective for teaching cognitive objectives while others are more effective for psychomotor skills. Consider the targeted learning domain, the methods of instruction, and what media will best help learners to understand the course content.

## III. Media Design

Message development and design entails creating and combining design elements in a pleasing, understandable manner in order to capture interest and convey information effectively.

### A. What are design elements?

1. Definition

The use of *design elements,* such as boldface and italics, can increase the impact and instructional value of words. Font selection, size, and color—those things that affect the appearance of text—are all examples of visual design elements.

2. Instructional value

The instructional value of visuals, in the form of photographs and slides, graphics such as pie- or flow- charts, cartoons, and design elements such as lines, boxes, shapes, highlighting, and the use of color has been extensively investigated.

These visual "cues" have proven effective in grabbing the learner's attention, helping he or she to process information and understand it, and increasing what is remembered of the content. In order to develop messages that communicate effectively, instructors must deal with both the message itself and the design elements that, if properly applied, can increase learning.

Research related to learning from visuals indicates that relevant pictures or drawings help learners to understand and recall the content of verbal delivery or printed text. For example, graphics, pictures, or drawings presented prior

B. What factors should be considered in media design?

1. Legibility

to instruction, known as advanced organizers, provide a context for the information that follows. This helps learners to organize information and thus aids cognitive processing.

Visual aids play an important role in studying specific subject matter, for example, the medical diagrams that are so much a part of EMS instruction. Visual aids promote learning by providing a visual representation of the system with labelled components, versus a text-only description of the material.

As an instructor, use as many visual representations as are appropriate. If the image helps to convey the message better, use it.

**B. What factors should be considered in media design?**

Three important factors to consider when evaluating or creating media are legibility, consistency, and relevance. These factors should then be evaluated in the light of the overall purposes to be accomplished, e.g., to organize, clarify, or emphasize particular content.

1. Legibility

As stated, media is used to clarify content. This is only possible if the material is easy to read. Different things affect legibility, such as color, size, and complexity.

**Color.** The following color combinations are listed in descending order of legibility: Black on yellow; green, red, or blue on white (clear film); white (clear film) on blue; black on white (clear film); yellow on black.

There is a physiological reason for differences in perception based on color that have to do with how colors are focused in the human eye. Warm colors, such as red and yellow, seem to approach the viewer, while cooler colors, such as blue and green, recede. Instructors can capitalize on this tendency by highlighting important points in red and orange.

**Size.** The size of the letters used should be easily read when used as intended. For example, billboards use very large text, because they are meant to be read by the passengers of cars whizzing by at 65 miles per hour.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | 2. Consistency<br>3. Relevance |

1092

ADDITIONAL INFORMATION

Likewise, transparencies are often meant to be read from the back of a large lecture hall. Be sure that the text is large enough to be read easily.

**Amount of material.** The amount of material should fit the media selected. A textbook page, designed to be read, can have fairly small print and a variety of fonts. However, for overheads, meant to be projected in a darkened room to a group of students, a good guideline is 7 lines of text in a clear, easy to read type style. Posters designed to be mounted on the wall and read at leisure can include diagrams with a great deal of detail. Motivational posters, on the other hand, should have a limited amount of text with eye-catching pictorial or graphic elements.

2. Consistency

Consistency ties related elements into a coherent whole, thus creating unity and balance. If you use boldface headings in one section, continue the practice throughout, so the reader will be able to predict the significance of the visual cue. Additionally, supporting media should be consistent with primary course materials. Instructors should determine if there are any inconsistencies and be prepared to address them.

3. Relevance

The principle of relevance has to do with making sure that supporting media specifically pertain to course content. Instructors should review materials, such as videos, and evaluate the content in terms of lesson objectives. The *significance* of the content presented via supporting media should always be a consideration. Use supporting media deliberately, to emphasize key points.

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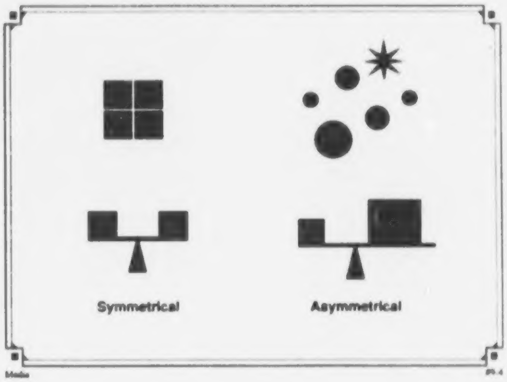
| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|

### C. Principles of Design

1. Unity
2. Balance


Symmetrical
Asymmetrical
Media

## ADDITIONAL INFORMATION

### C. Principles of Design

1. Unity

Unity is achieved by using related or repeated themes, colors, shapes, and types and formats of graphic elements, such as lines and boxes.

Eliminate nonessentials; do not clutter your design with extraneous information, whether verbal or visual. When developing your message, organize the information into distinct categories with a clear focus, so that you communicate only one idea at a time.

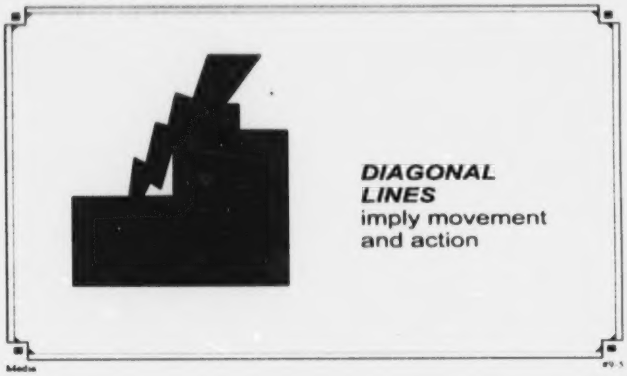
2. Balance

Balance describes the pattern of the elements in the visual. It engenders a psychological sense of equilibrium. The "weight" of the elements should be distributed equally on each side of an axis, vertical and horizontal.

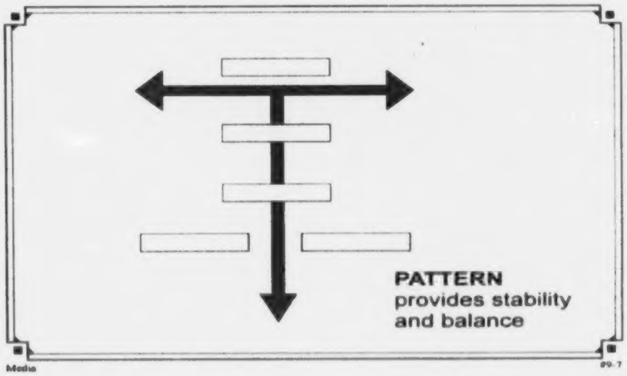
Balance can be achieved with symmetrical or asymmetrical arrangements. In most cases an informal, asymmetrical arrangement is more interesting and dynamic, and is especially suitable for posters and graphics. Aim for a rough equivalence of weight, but use diverse elements. For example, one large open square on one side, three dark circles on the other. Predictable patterns, such as regular geometric shapes, provide a convenient framework for screen design, as do arrangements that approximate certain letters of the alphabet, such as C, O, T, and S.

*PARTICIPANT NOTES* | *LESSON PLAN*

3. Perceptual impact of different designs



***DIAGONAL LINES***
imply movement and action



**PATTERN**
provides stability and balance

## *ADDITIONAL INFORMATION*

3. Perceptual impact of different designs

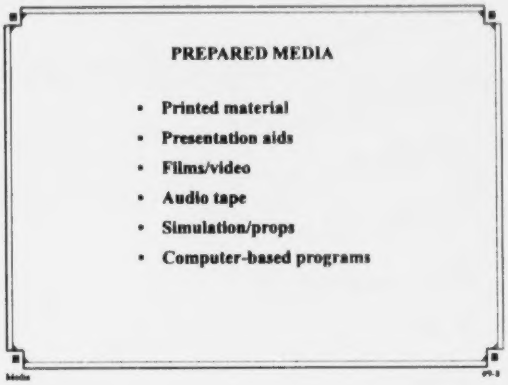
   The perceptual impact of pictures, colors, etc., is considerable. Be sure that the impact is consistent with your message. For example, if you are attempting to attract volunteers to a fund-raising barbecue, bright colors, fun graphics, and bold text correspond with the message. However, if you are encouraging employees to take part in a stress reduction workshop, a more formal, symmetrical arrangement and soothing colors will impart a sense of serene tranquility.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | IV. Teaching Aids |

IV. Teaching Aids

A. Prepared vs. spontaneous

B. Prepared Media



**PREPARED MEDIA**

- Printed material
- Presentation aids
- Films/video
- Audio tape
- Simulation/props
- Computer-based programs

Media

*ADDITIONAL INFORMATION*

## IV. Teaching Aids

### A. Prepared vs. spontaneous

Some media are prepared completely prior to class; others are created as part of a discussion or activity. Prepared media necessarily have static content until updated outside of class. With spontaneous media, the instructor will have specific content in mind, but the process is flexible and creative.

### B. Prepared Media

Prepared media offer the advantages of allowing time for preparation in advance of presentation and the ability to target specific content. Development time allows the instructor to create polished, complex materials that reflect exactly those points he/she considers vital.

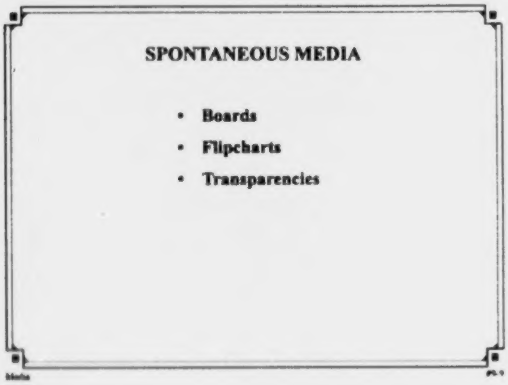
Refer to reference 9-1, Training Media, in Appendix B, for in-depth information about a variety of prepared media.

PARTICIPANT NOTES

LESSON PLAN

C. Spontaneous Media

1. Overview



**SPONTANEOUS MEDIA**

- **Boards**
- **Flipcharts**
- **Transparencies**

Media

## C. Spontaneous Media

### 1. Overview

Interactive creation, or the process in which an instructor solicits input from students while employing an instructional aid, is valuable for a number a reasons. First, the students become invested; their thoughts are being incorporated into the product. They have a sense of directing outcomes; this is particularly attractive to adult learners. Spontaneous creation works well when a variety of subjective interpretations are possible, or when the applications are endless. Still, instructors should keep in mind that interactive creation *should be* directed by course objectives. You should be prepared to complete the process by filling in specific points, or by guiding the discussion so that all significant elements are addressed. We will discuss three basic types of spontaneous media.

**Boards.** Both traditional chalkboards and "whiteboards," which are used with special erasable markers (adds color), offer large work spaces for creating diagrams, outlining major concepts, flowcharting processes, or in other ways reinforcing lecture material. Instructors have the option of distributing printed handouts, but the immediacy and movement of spontaneous creation adds energy to a class discussion. Information can be left up to the class while other aids, such as transparencies, are being used to develop other points. This allows students time to absorb and record material.

**Flipcharts.** Flipcharts do not allow as much space as boards, but they do have the advantage of creating a permanent record. Pages can be saved and used later, perhaps in a group activity to further develop concepts, or they can be displayed around the room to continually reinforce key ideas. They are transportable. To ensure everyone can see the flipcharts, this medium is best used in groups of no more than twenty to thirty.

**Transparencies.** Transparencies can be used to record student input in much the same way as a flipchart. They are usually easy for everyone to see.

Practice using a variety of spontaneous media in your classroom instruction. This keeps interest and involvement high.

*PARTICIPANT NOTES* | *LESSON PLAN*

D. Activity 9.1—Create Your Own Media

1. In-class preparation time
2. Additional preparation
3. Demonstration and practice

## ADDITIONAL INFORMATION

### D. Activity 9.1—Create Your Own Media

1. In-class preparation time

   Have the class divide into groups of three. Using the EMT-Basic lessons, group members will help each other in the creation of teaching aids to support lesson content. Encourage diversity, creativity, and valid application of learning theory, etc.

   **Develop your message.** Have each individual write down the key information or skills that must be communicated.

   **Discuss with your peers.** Obtain feedback from the group. Often brainstorming can generate unique and creative design concepts.

   **Layout design.** Each student should develop one piece of supporting media each, such as an overhead, chart, poster, or checklist. Instruct them to present a draft to the group members. Encourage positive and corrective feedback.

2. Additional preparation

   Students must create or acquire supplemental media in presentation form for their assigned EMT-Basic lesson. Provide media resource information, supplies, and in-class work time as needed.

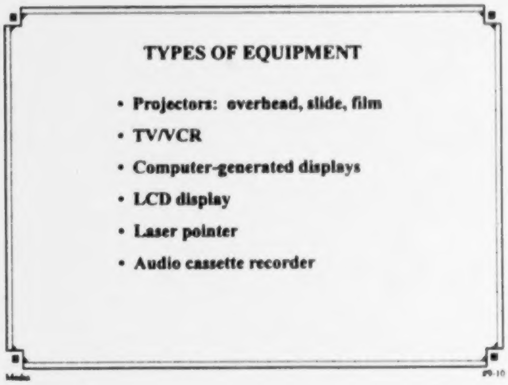
3. Demonstration and practice

   Media that is cumbersome to use, or that is used ineptly, distracts from learning. Instructor Trainees should become comfortable operating equipment and practice writing on boards and flipcharts prior to their presentations. They should try operating equipment prior to class and make sure transparencies are labelled clearly and stacked in order.

*PARTICIPANT NOTES* *LESSON PLAN*

## V. Equipment

A. Types



**TYPES OF EQUIPMENT**

- **Projectors: overhead, slide, film**
- **TV/VCR**
- **Computer-generated displays**
- **LCD display**
- **Laser pointer**
- **Audio cassette recorder**

B. Getting ready to teach

1. Put Together a "Lecture Box"

1104

ADDITIONAL INFORMATION

## V. Equipment

### A. Types

- Projectors: Overhead, Slide, Film, sample media
- TV/VCR, sample videotape
- Audio Cassette Recorder, sample educational audiotape
- Computer-generated projection equipment and demo disk
- LCD Display, sample graphic
- Laser Pointer

The focus of the equipment portion of the Media lesson should involve preparations for the Final Presentations. Students who are unfamiliar with the equipment they will be using should be given a demonstration and an opportunity to practice.

If time limitations allow, provide a demonstration of the newer technologies, such as computer-based instruction/presentation equipment. These innovations are becoming more readily available and may be of interest.

### B. Getting ready to teach

1. Put together a "Lecture Box"

Whether teaching locally or at a distant site, it pays to have the materials and equipment you will need when lecturing organized in one convenient place, ready to go, in easily transportable storage. Ideal for this purpose is a hard plastic box with a handle, such as those designed to hold hanging files. These are available at office supply stores, and although large enough to hold all of the materials suggested here, they still qualify as carry-on luggage on airplanes.

Include speaker's notes and any handouts or references for the class. Suggestion: keep notes in a 1/2 inch three-ring binder to prevent disarray if dropped. Any information about the lecture location, contact names and phone numbers, course flyers and directions can be placed into a labeled hanging file folder. A carousel of slides (two will fit if some other items are eliminated) is a necessary addition for many presentations. It is a good idea to include a mini slide viewer for a last minute check of slides prior to class.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | 2. General media supplies |
| | **VI. Summary** |
| | **References** |

1106

One frequent lecturer, the source of the "Lecture Box" concept, suggests including hemostats to separate stuck slides.

You might consider including a kitchen timer to place on the lectern to keep track of time, and a small, battery-operated reading light for unlit lecterns. A handheld tape recorder allows you to tape your lecture and review it later for self-evaluation. Listening to the tape would be a good way to prepare when lecturing again on the same subject. Be sure to include batteries for all equipment, and spare light bulbs (for overhead projector). Finally, a retractable pointer (or laser pointer if you have one) is indispensable.

In addition to the items suggested above, it is a good idea to be prepared for any eventuality when using a variety of media. For an AV Tool Kit, include a heavy-duty extension cord and a small case of tools. Screen cleaner and lint-free wipes come in handy.

2. General media supplies

Here are some additional items to have on hand:

- Chalk and colored markers
- Whiteboard markers, a board cleaner, and cloths
- Thumb tacks, tape (for attaching flipchart pages to the walls)
- Batteries
- Light bulbs

## VI. Summary

This lesson presented the types of media available, how to select and design media, and how to use various types of equipment. Media is a valuable tool. It provides variety to your presentation, and helps keep students "tuned in."

## ADDITIONAL INFORMATION

### References

Reiser, R.A. and Gagne, R.M. Selecting media for instruction. Englewood Cliffs, N.J.: Educational Technology Publications, 1983

Anderson, R.H. Selecting and developing media for instruction. New York, N.Y.: American Society for Training Development, 1976

Heinrich, R., Molenda, M., Russell, J.D. Instructional media and the new technologies in education. New York, N.Y.: John Wiley, 1985.

1103

# LESSON PLAN DEVELOPMENT

## 10

- Overview ◂
- Components ◂
- Examples of Lesson Plans ◂
- Getting Started—Develop Your Own Lesson Plan ◂

# LESSON PLAN DEVELOPMENT

## *OVERVIEW*

**Suggested instructional time for this lesson:** 2 hours

### Introduction

As an EMS Instructor, you will teach courses that use different styles of lesson plans. It is important that you are familiar with the variety of lesson plans that you may encounter, and that you recognize the basic components of an effective lesson plan.

### Lesson Objectives

Through group discussion and question and answer sessions, the EMS instructor trainee should be able to:

- State the purpose of lesson plans
- Identify the seven major components of a lesson plan
- Describe the importance of each lesson plan component
- Incorporate the seven major components of a lesson plan when adapting or creating an individual lesson plan from the EMT-Basic curriculum.

### Materials Needed

- Overhead projector and screen
- Flipchart and markers
- Appendix B
- Development materials identified in previous lessons

### Instructional Strategies

- Lecture
- Discussion
- Question and answer
- Visual aids
- Individual activity

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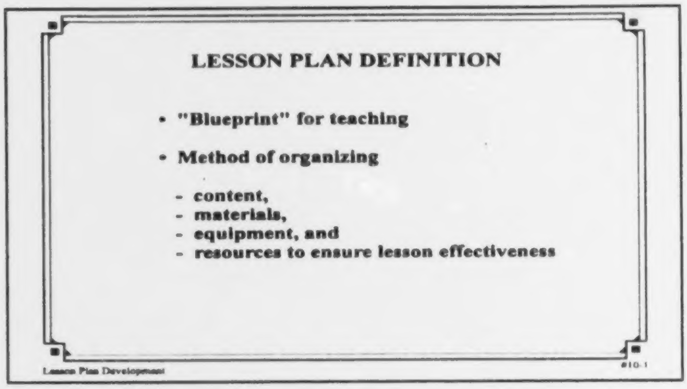
## Lesson Objectives

## I. Lesson Plan Overview

A. Definition



**LESSON PLAN DEFINITION**

- "Blueprint" for teaching
- Method of organizing
  - content,
  - materials,
  - equipment, and
  - resources to ensure lesson effectiveness

Lesson Plan Development #10-1

B. Types

- Scripted
- Outline

C. Examples

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*ADDITIONAL INFORMATION*

## I. Lesson Plan Overview

### A. Definition

A lesson plan is the "blueprint" for teaching a lesson. It is a method of organizing content, materials, equipment, and resources in such a manner as to ensure the outcome of training.

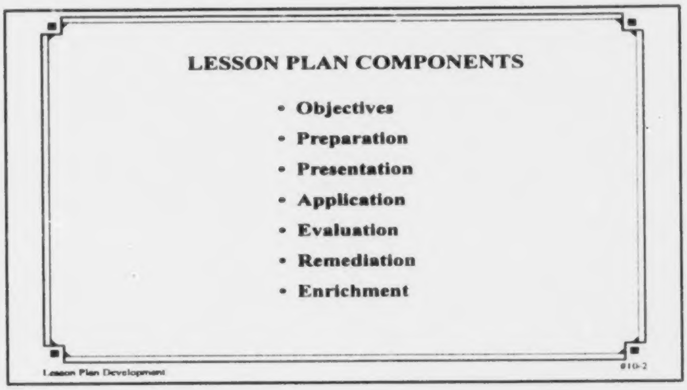
### B. Types

The lesson plans that you will work with in courses provided by NHTSA range from those that are fully scripted, i.e., all the detailed text is provided, to those that are only outlines of the content that you will instruct. Both options allow you the flexibility to tailor the instruction to best meet the needs of your students.

### C. Examples

During this lesson, we will use examples from the *EMT-Basic: National Standard Curriculum* and the *Emergency Vehicle Operator Course (Ambulance)* to demonstrate the differences and similarities in the two main types of lesson plans that you will encounter. Sample pages from these two courses are included in Appendix B.

## II. Lesson Plan Components



LESSON PLAN COMPONENTS

- Objectives
- Preparation
- Presentation
- Application
- Evaluation
- Remediation
- Enrichment

Lesson Plan Development

#10-2

A. Objectives

1. Importance

2. Classification

## II. The seven basic components of any lesson plan are:

- Objectives
- Preparation
- Presentation
- Application
- Evaluation
- Remediation
- Enrichment

The terminology for the components will vary from course to course. The seven shown above are those used in the *EMT-Basic* course, but in general, should apply to any effective lesson plan.

### A. Objectives

1. Importance

The criticality of developing instruction based on well-defined Objectives was covered earlier in this course. Objectives allow both you and the students to understand immediately the expected outcomes of the lesson.

2. Classification

As we learned earlier, Objectives can be classified according to domains of learning - cognitive, affective, and psychomotor. In some lesson plans, the objectives are grouped according to these categories.

3. Examples of objectives

B. Preparation

1. Motivation

2. Materials/Equipment

*ADDITIONAL INFORMATION*

3. Examples of objectives

The *EMT-Basic* course groups objectives according to the targeted learning domain. Other lesson plans, like those contained in the *EVOC (Ambulance)* course, group all objectives for each lesson under the heading Performance Objectives.

In either case, the objectives for the lesson should indicate the types of learning desired and be presented in the appropriate chronological order.

In modifying lesson plans to meet the specific needs of your students, it is helpful to think about training outcomes in terms of the three domains of objectives. This will help to ensure that all of the types of learning are addressed in the lesson.

## B. Preparation

1. Motivation

The Preparation component of a lesson plan contains several elements. One is a motivational or introductory message to the students. The intent of this section is to provide an overview of the lesson content. Another purpose is to describe the importance of the lesson to the students, a "what's in it for me" message.

2. Materials/Equipment

Another element of the Preparation component of a lesson plan is the materials and/or equipment needed to present the lesson, e.g., audio/visual equipment, flipchart, exam gloves, stethoscope, blood pressure cuffs. Additional materials can include handouts, such as job aids, registration forms, and overhead transparencies that you will use in class. Any additional personnel that you will need to assist you in instructing the lesson should also be stated, e.g., EMT Instructor knowledgeable in patient assessment.

| *PARTICIPANT NOTES* | *LESSON PLAN* |
|---|---|
| | 3. Prerequisites<br>4. Time estimated for lesson completion<br>5. Examples |

1117

## *ADDITIONAL INFORMATION*

3. Prerequisites

All prerequisite knowledge or skills required by the students prior to taking the lesson should be specified. Prerequisites can be stated for the entire course, or if the course is to be used in a modular format, by lesson.

4. Time estimated for lesson completion

Finally, the length of time estimated for lesson completion is part of the Preparation component of the lesson plan. The time estimate should include question and answer time, time for student exercises, quizzes, audio/visual presentations, and skill demonstration and practice. Also, be sure to schedule time for breaks and lunch.

Another important consideration in planning the length of the course is to include time for any enrichment lessons that you develop to supplement the core curriculum. Enrichment lessons target audience-specific content that is in addition to the instructional material provided in the course.

As an instructor, you must consider the characteristics and size of your student audience in creating or modifying time estimates. In preparing to instruct, you should note time estimates by lesson for lesson segment in the Instructor Guide so that you can better track your pace during actual course presentation. If your pacing is off from your original estimate, be prepared to adapt lesson content as you progress through the course.

5. Examples

As you can see, the preparation component is part of both the *EMT-Basic* and the *EVOC (Ambulance)* courses. However, the elements are in a different order or specified at the module level rather than lesson level.

| PARTICIPANT NOTES | LESSON PLAN |
|---|---|
| | C. Presentation<br>1. Declarative versus application<br>2. Format and detail differences<br>3. Examples |

## *ADDITIONAL INFORMATION*

### C. Presentation

1. Declarative vs. application

The Presentation component of a lesson plan is the actual knowledge, skills, and attitudes that you will impart to your students. The *EMT-Basic* course calls the knowledge part of the lesson plan the Declarative information to be presented. The *EMT-Basic* course calls the skills part of the lesson plan the Application portion of the program.

The Presentation section of lesson plans is where you will notice the most extreme differences in course structure. For example, some courses, like the *EVOC (Ambulance)*, do not distinguish between a Declarative and an Application section of a lesson plan; rather, the two types of content are interwoven.

2. Format and detail differences

The Presentation component of a lesson plan is also the place where you will notice the most striking differences in the level of detail provided from which to instruct, and the format of the lesson plan design.

3. Examples

For example, the Presentation section of the *EVOC Course (Ambulance)* is divided into two columns. One column is called Instructor Notes, where cues and supplemental information can be found. The other column is called Presentation. This column contains the scripted text, copies of the overhead transparencies, and detailed information on practice exercises.

The Presentation component of the *EMT-Basic* course is in outline format, and does not use icons or a column structure. Any question and answer sessions, class discussions, and overhead transparencies that the instructor feels are critical to the learning process must be prepared separately. Notice, however, that suggestions for methods to provide learning guidance are provided under the Student Activities section of each *EMT-Basic* lesson.

No matter what lesson plan style you use, it is not appropriate to read lesson plans verbatim to your class. The presentation section should be your guide from which to practice delivering the content of the lesson in a natural style, only referencing your Instructor Guide on a periodic basis.

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*PARTICIPANT NOTES* | *LESSON PLAN*

D. Application

1. Application versus declarative
2. Preparation and logistics
3. Application sections
4. Section definitions

## *ADDITIONAL INFORMATION*

### D. Application

1. Application versus declarative

The Application component of a lesson plan, as specified in the *EMT-Basic* course, is the skills portion of the lesson. The psychomotor skills lesson objectives are addressed in this section of the plan. The skills to be learned are based on the knowledge gained in the Declarative portion of the lesson.

2. Preparation and logistics

Skills requirements for EMS courses will sometimes involve extensive preparation for the instructor. For example, in an extrication class, it may be incumbent upon you to obtain an old car. If you plan to conduct a skills lesson in the classroom, be aware of special requirements. For example, student practice of splinting techniques will require moveable tables and a room that allows for plenty of room to spread out on the floor.

3. Application sections

Notice that the Application section of the *EMT-Basic* course is further subdivided into other sections. These are:

- Procedural
- Contextual
- Student Activities
- Instructor Activities

4. Section definitions

The Procedural section specifies the steps involved in performing the skill. The Contextual section presents the reasoning as to when, where, and why the student would need to use the knowledge or perform the skills covered in the lesson.

*PARTICIPANT NOTES* | *LESSON PLAN*

5. Student activities

6. Instructor activities

E. Evaluation

- Written/oral
- Practical

## *ADDITIONAL INFORMATION*

5. Student activities

The Student Activities section is based on the fact that students learn by various methods. The *EMT-Basic* course categorizes the methods as follows:

- Auditory (Hear)
- Visual (See)
- Kinesthetic (Do).

Within each of the three categories, recommendations are provided for presenting the lesson content so that learning is optimized for different students, no matter what their learning style happens to be.

Student Activities can be viewed as another term for instructional strategies. As we learned earlier in this course, learning can be reinforced through the use of meaningful activities that relate to the accomplishment of the lesson objectives.

6. Instructor activities

The Instructor Activities section reminds the instructor that he/she should always perform the following behaviors:

- Supervise student practice and praise progress
- Reinforce student progress in all three domains of learning (cognitive, affective, and psychomotor)
- Redirect students having difficulty with specific content.

### E. Evaluation

*Written and practical*

There are two types of Evaluation referenced in lesson plans:

- Written/oral
- Practical

*PARTICIPANT NOTES* | *LESSON PLAN*

   1. Generic examples
   2. Course-specific examples

F. Remediation

   1. Importance

## *ADDITIONAL INFORMATION*

1. Generic examples

Written Evaluation includes quizzes, lesson tests, module tests, and/or end-of-course tests where acquisition of knowledge and, in some cases, attitudes is measured. Practical Evaluations are skills-based assessments that determine mastery of psychomotor objectives and, in some cases, affective objectives.

2. Course specific examples

The development of appropriate Evaluation instruments was covered in detail earlier in this course, along with the design and development of learning objectives. Again, depending on the particular course you are teaching, the number and nature of the Evaluations will vary. No quizzes or tests for Written Evaluations are provided in the *EMT-Basic* course. Rather, you as the instructor must develop your own as your see appropriate. For Practical Evaluations, skill charts are provided in the *EMT-Basic* course that can be used to measure individual performance on mastering psychomotor objectives.

In other courses, such as the *EVOC (Ambulance)* course, Written Evaluation instruments are provided, as well as Practical Evaluation checklists for each module of instruction. However, when adapting the content of a lesson plan, you, as the instructor, should feel free to add to or modify Evaluation instruments for any course you teach. As part of Evaluation, remember that it is incumbent on the instructor to determine local requirements and/or policies for qualification and/or certification that involve the particular course you are teaching.

### F. Remediation

1. Importance

Remediation goes hand-in-hand with assessment of learning objectives. It is incumbent upon the instructor to attempt to meet the needs of any student who is experiencing difficulty in mastering the course content.

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    2. Generic examples
    3. EMT-Basic model Remediation Sheet

G. Enrichment

    1. Purpose
    2. Generic examples

2. Generic examples

Remediation can be as simple as providing the correct answers to missed quiz items, or it can be as complex as tutoring a student outside the classroom. External reading assignments or additional practice in mastering a skill are also forms of Remediation.

3. EMT-Basic model Remediation Sheet

The *EMT-Basic* course provides a model Remediation Sheet that can be used to document any knowledge, skill, and\or attitude for which a student is experiencing difficulty in any course. The form also includes space to describe an action plan for correcting the deficiency. These forms provide a record of student progress that the instructor can use to decide if a particular student will ultimately complete the course successfully or should discontinue the course.

## G. Enrichment

1. Purpose

The Enrichment component of a lesson plan is designed to allow you, as the instructor, to add new or supplemental information that is unique to your area or students. Enrichment lessons should be within the scope of practice and are subject to the approval of your State EMS Office.

2. Generic examples

Examples of local requirements are:

- Jellyfish injuries unique to coastal areas
- Ambulance operator reporting requirements
- Physical fitness policy for various EMS professionals
- Differing organizational policies and procedures

3. Course-specific examples

## *ADDITIONAL INFORMATION*

3. The *EMT-Basic* course provides a format for an Enrichment Lesson Plan that can be used to develop a lesson on any Enrichment topic within that particular course. The *EVOC (Ambulance)* course, on the other hand, uses an ambulance icon to reference points within each lesson that local policies or requirements on a particular topic should be researched.

*PARTICIPANT NOTES* | *LESSON PLAN*

## III. Activity 10.1—Develop Your Own Lesson Plan

A. Work individually, referring to all of the materials you have developed so far

B. Create a one-hour lesson plan

C. Determine a segment that can be presented in a half hour for your final presentation

1131

*ADDITIONAL INFORMATION*

## III. Activity 10.1—Develop Your Own Lesson Plan

This activity is the final step in the preparation of your Final Presentation. The instructor will provide in-class development time and the schedule may allow for preparation outside of class.

Refer to your EMT Basic lesson.

You have already developed this lesson's objectives, identified the evaluation instruments, selected instructional strategies, and selected what types of media you will use.

This activity focuses on pulling your instruction together. You will develop a lesson plan and materials for one hour of instruction. Materials include media, supporting materials, handouts, etc. At the end of this course, you will present one half hour of your lesson plan.

Use your handouts and refer to previous lessons for guidance. The instructor will also be available for advice and feedback.

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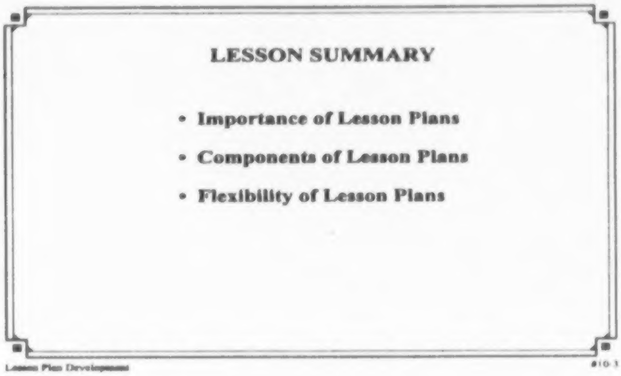
*PARTICIPANT NOTES* | *LESSON PLAN*

## IV. Summary



**LESSON SUMMARY**

- Importance of Lesson Plans
- Components of Lesson Plans
- Flexibility of Lesson Plans

Lesson Plan Development

#10-3

*ADDITIONAL INFORMATION*

## IV. Summary

An EMS Instructor should be well-versed with the content and structure of any lesson plan from which he or she will teach. Although the design and level of detail will vary, it is incumbent upon the instructor to ensure that it addresses the seven basic components of an effective lesson plan. The seven components are:

- Objectives
- Preparation
- Presentation
- Application
- Evaluation
- Remediation
- Enrichment

All lesson plans should be considered flexible documents that can be tailored to meet the specific needs of each group of students.

## References

EMT-Basic: National Standard Curriculum

Emergency Vehicle Operator Course (Ambulance) National Standard Curriculum

Gagne, R.M. (1985). The Conditions of Learning.

Chicago: Holt, Rinehart and Winston, Inc.

# PUTTING IT ALL TOGETHER—FINAL PRESENTATIONS

- Final Presentations ◂
- Peer/Instructor Feedback and Evaluation ◂
- Review of Course Objectives ◂
- Course Evaluation ◂

## FINAL PRESENTATIONS

**Objective:**

Students will demonstrate instructor skills in a realistic classroom setting.

**Time:**

30 minutes for each presentation and 15 minutes of feedback, per student

**Instructions:**

This course culminates in lesson presentations by the Instructor Trainees. Preparations are made throughout the course, primarily in the form of in-class activities. You will be assigned one of the EMT-Basic lessons located in this section as your topic. The presentations will be made during the last sessions of class, in order according to the Table of Contents. If the class is large, you may split a topic with another student.

One of the first tasks to accomplish in your preparation is a resource and literature search. Your instructor may provide textbooks and other source material. If you need assistance obtaining the materials you need, ask your instructor for assistance. Bring any resources you can to class for use during preparations.

In-class activities, beginning in Lesson 6, give you the opportunity to design, develop, and plan your instruction with instructor guidance and peer feedback. Components of your presentation include evaluating and refining lesson objectives, determining appropriate teaching methods, obtaining or creating supporting media, and the development of a lesson plan. You will be critiqued on your presentation and communication skills as well.

After each student has presented, there will be a fifteen minute opportunity for peer/instructor evaluation and feedback. Look over the Student Presentation Evaluation Form in Appendix B prior to the first presentation so that you know what to focus on for your critique.

## FINAL PRESENTATIONS (cont'd)

### Videotaped presentations

If desired, the presentations can be videotaped. If this is done, each student should be able to go into an adjacent room and view their own presentation immediately afterward. The next presentation can proceed without them, and evaluations can take place after the next person has presented, and so on. The evaluation should begin with the Instructor Trainee stating what they felt, from watching the videotape, was one strength and one thing they want to work to improve.

# EMT-BASIC LESSONS FOR FINAL PRESENTATIONS

1-1 INTRODUCTION TO EMERGENCY MEDICAL CARE

1-2 WELL-BEING OF THE EMT-BASIC

1-5 BASELINE VITAL SIGNS AND SAMPLE HISTORY

1-6 LIFTING AND MOVING PATIENTS

3-2 INITIAL ASSESSMENT

3-3 FOCUSED HISTORY AND PHYSICAL EXAM — TRAUMA PATIENTS

3-5 DETAILED PHYSICAL EXAM

3-7 COMMUNICATIONS

4-6 POISONING/OVERDOSE

5-1 BLEEDING AND SHOCK

5-3 MUSCULOSKELETAL CARE

5-4 INJURIES TO THE HEAD AND SPINE

# MODULE 1

## Preparatory

## Lesson 1-1

## Introduction to Emergency Care

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-1.1 Define Emergency Medical Services (EMS) systems.(C-1)
1-1.2 Differentiate the roles and responsibilities of the EMT-Basic from other prehospital care providers.(C-3)
1-1.3 Describe the roles and responsibilities related to personal safety.(C-1)
1-1.4 Discuss the roles and responsibilities of the EMT-Basic towards the safety of the crew, the patient and bystanders.(C-1)
1-1.5 Define quality improvement and discuss the EMT-Basic's role in the process.(C-1)
1-1.6 Define medical direction and discuss the EMT-Basic's role in the process.(C-1)
1-1.7 State the specific statutes and regulations in your state regarding the EMS system.(C-1)

### AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-1.8 Assess areas of personal attitude and conduct of the EMT-Basic.(A-3)
1-1.9 Characterize the various methods used to access the EMS system in your community.(A-3)

### PSYCHOMOTOR OBJECTIVES

No psychomotor objectives identified.

## PREPARATION

Motivation: The field of prehospital emergency medical care is an evolving profession in which the reality of life and death is confronted at a moment's notice. EMS has developed from the days when the local funeral home and other services served as the ambulance provider to a far more sophisticated system today. EMT-Basics work side by side with other health care professionals to help deliver professional prehospital emergency medical care. This course is designed to help the new EMT-Basic gain the knowledge, skills and attitude necessary to be a competent, productive, and valuable member of the emergency medical services team.

Prerequisites: BLS

## MATERIALS

AV Equipment: Utilize various audio-visual materials relating to emergency medical care. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met.

EMS Equipment: None required.

## PERSONNEL

Primary Instructor: One EMT-Basic instructor knowledgeable in EMT-Basic course overview, administrative paperwork, certification requirements, Americans with Disabilities Act issues, and roles and responsibilities of the EMT-Basic.

Assistant Instructor: None required.

Recommended Minimum Time to Complete: One and a half hours

3. Levels of training
   a. First Responder
   b. EMT-Basic
   c. EMT-Intermediate
   d. EMT-Paramedic
4. The health care system
   a. Emergency departments
   b. Specialty facilities
      (1) Trauma centers
      (2) Burn centers
      (3) Pediatric centers
      (4) Poison centers
      (5) Other specialty centers - locally dependent
5. Hospital personnel
   a. Physicians
   b. Nurses
   c. Other health professionals
6. Liaison with other public safety workers
   a. Local law enforcement
   b. State and federal law enforcement
7. Overview of the local EMS system

B. Roles and Responsibilities of the EMT-Basic
1. Personal safety
2. Safety of crew, patient and bystanders
3. Patient assessment
4. Patient care based on assessment findings
5. Lifting and moving patients safely
6. Transport/transfer of care
7. Record keeping/data collection
8. Patient advocacy (patient rights) - patient as a whole

C. Professional attributes
1. Appearance
   a. Neat
   b. Clean
   c. Positive image
2. Maintains up-to-date knowledge and skills
   a. Continuing education
   b. Refresher courses
3. Puts patient's needs as a priority without endangering self.
4. Maintains current knowledge of local, state, and national issues affecting EMS.

- D. Quality improvement
  - 1. Definition - a system of internal/external reviews and audits of all aspects of an EMS system so as to identify those aspects needing improvement to assure that the public receives the highest quality of prehospital care.
  - 2. The role of the EMT-Basic in quality improvement
    - a. Documentation
    - b. Run reviews and audits
    - c. Gathering feedback from patients and hospital staff
    - d. Conducting preventative maintenance
    - e. Continuing education
    - f. Skill maintenance
- E. Medical direction
  - 1. Definition
    - a. A physician responsible for the clinical and patient care aspects of an EMS system.
    - b. Every ambulance service/rescue squad must have physician medical direction.
    - c. Types of medical direction
      - (1) On-line
        - (a) Telephone
        - (b) Radio
      - (2) Off-line
        - (a) Protocols
        - (b) Standing orders
    - d. Responsible for reviewing quality improvement
  - 2. The relationship of the EMT-Basic to medical direction
    - a. Designated agent of the physician
    - b. Care rendered is considered an extension of the medical director's authority (varies by state law).
- F. Specific statutes and regulations regarding EMS in your state

## APPLICATION

Procedural (How)

None identified for this lesson.

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### Contextual (When, Where, Why)

The student will use this information throughout the course to enhance his understanding and provide direction for the EMT-Basic's relationship to the individual components of the EMS system. The lesson will provide the student with a road map for learning the skill and knowledge domains of the EMT-Basic. Additionally, this lesson will identify that not all students meet the mental and physical requirements of the career field. After completion of the course, the EMT-Basic will use this information to understand the process of gaining and maintaining certification, as well as understanding state and local legislation affecting the profession. This lesson sets the foundation for the remaining teaching/learning process. A positive, helpful attitude presented by the instructor is *essential* to assuring a positive, helpful attitude from the student.

## STUDENT ACTIVITY

### Auditory (Hear)

1. Students will hear specifically what they can expect to receive from the training program.
2. Students will hear the specific expectations of the training program.
3. Students will hear actual state and local legislation relative to EMS practice and certification.

### Visual (See)

1. Students will see audio-visual aids or materials explaining the components of the health care system, EMT-Basic level of care, EMT-Basic's roles and responsibilities, professional attributes, and certification requirements.
2. Students will receive a copy of the cognitive, affective and psychomotor objectives for the entire curriculum.
3. Students will receive the final skill evaluation instruments.

### Kinesthetic (Do)

1. Students will practice situations in which EMT-Basics portray professional attributes and experience ethical dilemmas.
2. Students will complete the necessary course paperwork.
3. Students will indicate if they will require/request assistance during the course or certification process based on the Americans with Disabilities Act. Additionally, students will provide the necessary documentation to support the requirements/request.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation form).

## EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

# MODULE 1

## Preparatory

## Lesson 1-2

## Well-Being of the EMT-Basic

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-2.1 List possible emotional reactions that the EMT-Basic may experience when faced with trauma, illness, death and dying. (C-1)
1-2.2 Discuss the possible reactions that a family member may exhibit when confronted with death and dying.(C-1)
1-2.3 State the steps in the EMT-Basic's approach to the family confronted with death and dying.(C-1)
1-2.4 State the possible reactions that the family of the EMT-Basic may exhibit due to their outside involvement in EMS.(C-1)
1-2.5 Recognize the signs and symptoms of critical incident stress.(C-1)
1-2.6 State possible steps that the EMT-Basic may take to help reduce/alleviate stress.(C-1)
1-2.7 Explain the need to determine scene safety. (C-2)
1-2.8 Discuss the importance of body substance isolation (BSI).(C-1)
1-2.9 Describe the steps the EMT-Basic should take for personal protection from airborne and bloodborne pathogens.(C-1)
1-2.10 List the personal protective equipment necessary for each of the following situations:(C-1)
- Hazardous materials
- Rescue operations
- Violent scenes
- Crime scenes
- Exposure to bloodborne pathogens
- Exposure to airborne pathogens

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-2.11 Explain the rationale for serving as an advocate for the use of appropriate protective equipment. (A-3)

## PSYCHOMOTOR OBJECTIVES

1-2.12 Given a scenario with potential infectious exposure, the EMT-Basic will use appropriate personal protective equipment. At the completion of the scenario, the EMT-Basic will properly remove and discard the protective garments. (P-1,2)

1-2.13 Given the above scenario, the EMT-Basic will complete disinfection/cleaning and all reporting documentation.(P-1,2)

## PREPARATION

Motivation: EMT-Basics encounter many stressful situations providing emergency medical care to patients. These range from death and terminal illness to major traumatic situations and child abuse. EMT-Basics will treat angry, scared, violent, seriously injured and ill patients and family members. The EMT-Basic is not immune from the personal effects of these situations. EMT-Basics will learn during this lesson what to expect and how to assist the patient, patient's family, the EMT-Basic's family and other EMT-Basics in dealing with the stress. This lesson discusses methods of talking to friends and family, without violating confidentiality, but as a means of helping them cope with involvement in EMS. Finally, aspects of personal safety will be discussed. It is important to realize this is only a brief overview and will be readdressed with each specific skill or topic. To put this in perspective, remember: A dead or injured EMT-Basic is of little or no use to a patient.

Prerequisites: BLS

## MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to the well-being of the EMT-Basic. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met. |
| EMS Equipment: | Eye protection, gowns, gloves, masks, forms for reporting exposures. |

## PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in critical incident stress debriefing, identifying child/elderly abuse, stages of death and dying, and aspects of scene safety. |
| Assistant Instructor: | None required. |
| Recommended Minimum Time to Complete: | One and a half hours |

## PRESENTATION

Declarative (What)

I. Emotional Aspects of Emergency Care
    A. Death and dying
        1. Stages
            a. Denial ("Not me.") - defense mechanism creating a buffer between shock of dying and dealing with the illness/injury.
            b. Anger ("Why me.")
                (1) EMT-Basics may be the target of the anger.
                (2) Don't take anger or insults personally.
                    (a) Be tolerant.
                    (b) Do not become defensive.
                (3) Employ good listening and communication skills.
                (4) Be empathetic.

- c. Bargaining ("OK, but first let me...") - agreement that, in the patient's mind, will postpone the death for a short time.
- d. Depression ("OK, but I haven't...")
  - (1) Characterized by sadness and despair.
  - (2) Patient is usually silent and retreats into his own world.
- e. Acceptance ("OK, I am not afraid.")
  - (1) Does not mean the patient will be happy about dying.
  - (2) The family will usually require more support during this stage than the patient.

2. Dealing with the dying patient and family members
   - a. Patient needs include dignity, respect, sharing, communication, privacy and control.
   - b. Family members may express rage, anger and despair.
   - c. Listen empathetically.
   - d. Do not falsely reassure.
   - e. Use a gentle tone of voice.
   - f. Let the patient know everything that can be done to help will be done.
   - g. Use a reassuring touch, if appropriate.
   - h. Comfort the family.

B. Stressful situations
   1. Examples of situations that may produce a stress response
      - a. Mass casualty situations
      - b. Infant and child trauma
      - c. Amputations
      - d. Infant/child/elder/spouse abuse
      - e. Death/injury of co-worker or other public safety personnel
   2. The EMT-Basic will experience personal stress as well as encounter patients and bystanders in severe stress.

C. Stress management
   1. Recognize warning signs
      - a. Irritability to co-workers, family, friends
      - b. Inability to concentrate
      - c. Difficulty sleeping/nightmares
      - d. Anxiety
      - e. Indecisiveness
      - f. Guilt
      - g. Loss of appetite

h. Loss of interest in sexual activities
i. Isolation
j. Loss of interest in work

2. Life-style changes
   a. Helpful for "job burnout"
   b. Change diet
      (1) Reduce sugar, caffeine and alcohol intake
      (2) Avoid fatty foods
      (3) Increase carbohydrates
   c. Exercise
   d. Practice relaxation techniques, meditation, visual imagery
3. Balance work, recreation, family, health, etc.
4. EMS personnel and their family's and friends' responses
   a. Lack of understanding
   b. Fear of separation and being ignored
   c. On-call situations cause stress
   d. Can't plan activities
   e. Frustration caused by wanting to share
5. Work environment changes
   a. Request work shifts allowing for more time to relax with family and friends.
   b. Request a rotation of duty assignment to a less busy area.
6. Seek/refer professional help.

D. Critical incident stress debriefing (CISD)

1. A team of peer counsellors and mental health professionals who help emergency care workers deal with critical incident stress.
2. Meeting is held within 24 to 72 hours of a major incident.
   a. Open discussion of feelings, fears, and reactions
   b. Not an investigation or interrogation
   c. All information is confidential
   d. CISD leaders and mental health personnel evaluate the information and offer suggestions on overcoming the stress.
3. Designed to accelerate the normal recovery process after experiencing a critical incident.
   a. Works well because feelings are ventilated quickly.
   b. Debriefing environment is non-threatening.
4. How to access local CISD system.

- E. Comprehensive critical incident stress management includes:
    - 1. Pre-incident stress education
    - 2. On-scene peer support
    - 3. One-on-one support
    - 4. Disaster support services
    - 5. Defusings
    - 6. CISD
    - 7. Follow up services
    - 8. Spouse/family support
    - 9. Community outreach programs
    - 10. Other health and welfare programs such as wellness programs
- II. Scene Safety
    - A. Body substance isolation (BSI) (Bio-Hazard)
        - 1. EMT-Basic's and patient's safety
            - a. Hand washing
            - b. Eye protection
                - (1) If prescription eyeglasses are worn, then removable side shields can be applied to them.
                - (2) Goggles are NOT required.
            - c. Gloves (vinyl or latex)
                - (1) Needed for contact with blood or bloody body fluids.
                - (2) Should be changed between contact with different patients.
            - d. Gloves (utility) - needed for cleaning vehicles and equipment
            - e. Gowns
                - (1) Needed for large splash situations such as with field delivery and major trauma.
                - (2) Change of uniform is preferred.
            - f. Masks
                - (1) Surgical type for possible blood splatter (worn by care provider)
                - (2) High Efficiency Particulate Air (HEPA) respirator if patient suspected for or diagnosed with tuberculosis (worn by care provider)
                - (3) Airborne disease - surgical type mask (worn by patient)
            - g. Requirements and availability of specialty training

2. OSHA/state regulations regarding BSI
3. Statutes/regulations reviewing notification and testing in an exposure incident

B. Personal protection
1. Hazardous materials
    a. Identify possible hazards
        (1) Binoculars
        (2) Placards
        (3) *Hazardous Materials, The Emergency Response Handbook*, published by the United States Department of Transportation
    b. Protective clothing
        (1) Hazardous material suits
        (2) Self Contained Breathing Apparatus
    c. Hazardous materials scenes are controlled by specialized Haz-Mat teams.
    d. EMT-Basics provide emergency care only after the scene is safe and patient contamination limited.
    e. Requirements and availability of specialized training
2. Rescue
    a. Identify and reduce potential life threats.
        (1) Electricity
        (2) Fire
        (3) Explosion
        (4) Hazardous materials
    b. Protective clothing
        (1) Turnout gear
        (2) Puncture-proof gloves
        (3) Helmet
        (4) Eye wear
    c. Dispatch rescue teams for extensive/heavy rescue.

3. Violence
    a. Scene should always be controlled by law enforcement before EMT-Basic provides patient care.
        (1) Perpetrator of the crime
        (2) Bystanders
        (3) Family members
    b. Behavior at crime scene (covered in greater detail in Medical/Legal and Ethical Issues, Module 1, Lesson 1-3).
        (1) Do not disturb the scene unless required for medical care.
        (2) Maintain chain of evidence.

III. Safety Precautions in Advance - Suggested Immunizations
    A. Tetanus prophylaxis
    B. Hepatitis B vaccine
    C. Verification of immune status with respect to commonly transmitted contagious diseases
    D. Access or availability of immunizations in the community
    E. Tuberculin purified protein derivative (PPD) testing
    F. Others

## APPLICATION

Procedural (How)

1. The EMT-Basic will know how to access additional information on hazardous materials and infectious disease exposure, notification and follow-up.

Contextual (When, Where, Why)

1. The EMT-Basic will use the aspects of scene safety and personal protection every day and on every emergency run.
2. While the EMT-Basic may not be a member of a hazardous material or heavy rescue team, this lesson should provide the personal incentive to seek out and attend continuing education programs relative to personal safety during hazardous material incidents, rescue situations and violent crime scenes.
3. If the EMT-Basic fails to develop personal safety skills, his EMT-Basic career may come to a premature end through serious injury or death.

4. The well-being of the EMT-Basic depends upon his ability to recognize that stressful traumatic situations do occur and the effect of those situations is felt by the patient, family members and the EMT-Basic. In recognizing this, the EMT-Basic must be aware of internal and external mechanisms to help himself, the patient, patient's families, EMT-Basic's family and other EMT-Basics deal with reactions to stress.
5. The EMT-Basic will use proper communication techniques when dealing with the grieving process.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. The student will hear the instructor demonstrate methods of communicating with patients and family members of terminally ill patients.
2. The student will hear the instructor demonstrate methods of communicating with friends and family members of a dead or dying patient.

### Visual (See)

1. The student will see various audio-visual aids or materials of scenes requiring personal protection.
2. The student will see various audio-visual aids or materials of personal protection clothing worn by hazardous material/rescue teams.
3. The student will see the gown, gloves, mask and eye protection associated with body substance isolation (BSI).

### Kinesthetic (Do)

1. The student will practice role play, talking to patients in various stressful/traumatic situations.
2. The student will practice putting on and removing gowns, gloves and eye protection gear.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

# MODULE 1

## Preparatory

## Lesson 1-5

## Baseline Vital Signs and SAMPLE History

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-5.1 Identify the components of vital signs.(C-1)
1-5.2 Describe the methods to obtain a breathing rate.(C-1)
1-5.3 Identify the attributes that should be obtained when assessing breathing.(C-1)
1-5.4 Differentiate between shallow, labored and noisy breathing.(C-3)
1-5.5 Describe the methods to obtain a pulse rate.(C-1)
1-5.6 Identify the information obtained when assessing a patient's pulse.(C-1)
1-5.7 Differentiate between a strong, weak, regular and irregular pulse.(C-3)
1-5.8 Describe the methods to assess the skin color, temperature, condition (capillary refill in infants and children).(C-1)
1-5.9 Identify the normal and abnormal skin colors.(C-1)
1-5.10 Differentiate between pale, blue, red and yellow skin color. (C-3)
1-5.11 Identify the normal and abnormal skin temperature.(C-1)
1-5.12 Differentiate between hot, cool and cold skin temperature. (C-3)
1-5.13 Identify normal and abnormal skin conditions.(C-1)
1-5.14 Identify normal and abnormal capillary refill in infants and children.(C-1)
1-5.15 Describe the methods to assess the pupils.(C-1)
1-5.16 Identify normal and abnormal pupil size.(C-1)
1-5.17 Differentiate between dilated (big) and constricted (small) pupil size. (C-3)
1-5.18 Differentiate between reactive and non-reactive pupils and equal and unequal pupils. (C-3)
1-5.19 Describe the methods to assess blood pressure.(C-1)

1-5.20 Define systolic pressure.(C-1)
1-5.21 Define diastolic pressure.(C-1)
1-5.22 Explain the difference between auscultation and palpation for obtaining a blood pressure.(C-1)
1-5.23 Identify the components of the SAMPLE history.(C-1)
1-5.24 Differentiate between a sign and a symptom. (C-3)
1-5.25 State the importance of accurately reporting and recording the baseline vital signs.(C-1)
1-5.26 Discuss the need to search for additional medical identification.(C-1)

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:
1-5.27 Explain the value of performing the baseline vital signs.(A-2)
1-5.28 Recognize and respond to the feelings patients experience during assessment.(A-1)
1-5.29 Defend the need for obtaining and recording an accurate set of vital signs.(A-3)
1-5.30 Explain the rationale of recording additional sets of vital signs.(A-1)
1-5.31 Explain the importance of obtaining a SAMPLE history.(A-1)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:
1-5.32 Demonstrate the skills involved in assessment of breathing.(P-1,2)
1-5.33 Demonstrate the skills associated with obtaining a pulse. (P-1,2)
1-5.34 Demonstrate the skills associated with assessing the skin color, temperature, condition, and capillary refill in infants and children.(P-1,2)
1-5.35 Demonstrate the skills associated with assessing the pupils. (P-1,2)
1-5.36 Demonstrate the skills associated with obtaining blood pressure.(P-1,2)
1-5.37 Demonstrate the skills that should be used to obtain information from the patient, family, or bystanders at the scene. (P-1,2)

## PREPARATION

| | |
|---|---|
| Motivation: | An EMT-Basic must be able to accurately assess and record a patient's vital signs. This must be done to record trends in the patient's condition. In addition to vital signs, obtain a SAMPLE history in the event that the patient loses consciousness. |
| Prerequisite Skills: | BLS |

## MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to vital signs and SAMPLE history. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met. |
| EMS Equipment: | Exam gloves, stethoscope (dual and single head)(1:6), blood pressure cuffs (adult, infant and child)(1:6), penlights (1:6). |

## PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in patient assessment. |
| Assistant Instructor: | The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in assessing baseline vital signs and SAMPLE histories. |
| Recommended Minimum Time to Complete: | Two hours |

## PRESENTATION

### Declarative (What)

I. General Information
  A. Chief complaint - why EMS was notified
  B. Age - years, months, days
  C. Sex - male or female
  D. Race
II. Baseline Vital Signs
  A. Breathing - assessed by observing the patient's chest rise and fall.
    1. Rate is determined by counting the number of breaths in a 30-second period and multiplying by 2. Care should be taken not to inform the patient, to avoid influencing the rate.
    2. Quality of breathing can be determined while assessing the rate. Quality can be placed in 1 of 4 categories:
      a. Normal - average chest wall motion, not using accessory muscles.
      b. Shallow - slight chest or abdominal wall motion.
      c. Labored
        (1) An increase in the effort of breathing
        (2) Grunting and stridor
        (3) Often characterized by the use of accessory muscles
        (4) Nasal flaring, supraclavicular and intercostal retractions in infants and children
        (5) Sometimes gasping
      d. Noisy - an increase in the audible sound of breathing. May include snoring, wheezing, gurgling, crowing.
  B. Pulse
    1. Initially a radial pulse should be assessed in all patients one year or older. In patients less than one year of age a brachial pulse should be assessed.
    2. If the pulse is present, assess rate and quality.
      a. Rate is the number of beats felt in 30 seconds multiplied by 2.
      b. Quality of the pulse can be characterized as:
        (1) Strong
        (2) Weak
        (3) Regular

- (4) Irregular
- 3. If peripheral pulse is not palpable, assess carotid pulse.
  - a. Use caution. Avoid excess pressure on geriatrics.
  - b. Never attempt to assess carotid pulse on both sides at one time.
- C. Assess skin to determine perfusion.
  - 1. The patient's color should be assessed in the nail beds, oral mucosa, and conjunctiva.
    - a. In infants and children, palms of hands and soles of feet should be assessed.
    - b. Normal skin - pink
    - c. Abnormal skin colors
      - (1) Pale - indicating poor perfusion (impaired blood flow)
      - (2) Cyanotic (blue-gray) - indicating inadequate oxygenation or poor perfusion
      - (3) Flushed (red) - indicating exposure to heat or carbon monoxide poisoning.
      - (4) Jaundice (yellow) - indicating liver abnormalities
  - 2. The patient's temperature should be assessed by placing the back of your hand on the patient's skin.
    - a. Normal - warm
    - b. Abnormal skin temperatures
      - (1) Hot - indicating fever or an exposure to heat.
      - (2) Cool - indicating poor perfusion or exposure to cold.
      - (3) Cold - indicates extreme exposure to cold.
  - 3. Assess the condition of the patient's skin.
    - a. Normal - dry
    - b. Abnormal - skin is wet, moist, or dry.
  - 4. Assess capillary refill in infants and children less than six years of age.
    - a. Capillary refill in infants and children is assessed by pressing on the patient's skin or nail beds and determining time for return to initial color.
    - b. Normal capillary refill in infants and children is < 2 seconds.
    - c. Abnormal capillary refill in infants and children is > 2 seconds.

D. Pupils are assessed by briefly shining a light into the patient's eyes, and determining size and reactivity.
  1. Dilated (very big), normal, or constricted (small).
  2. Equal or unequal
  3. Reactivity is whether or not the pupils change in response to the light.
    a. Reactive - change when exposed to light
    b. Non-reactive - do not change when exposed to light
    c. Equally or unequally reactive

E. Blood pressure
  1. Assess systolic and diastolic pressures.
    a. Systolic blood pressure is the first distinct sound of blood flowing through the artery as the pressure in the blood pressure cuff is released. This is a measurement of the pressure exerted against the walls of the arteries during contraction of the heart.
    b. Diastolic blood pressure is the point during deflation of the blood pressure cuff at which sounds of the pulse beat disappear. It represents the pressure exerted against the walls of the arteries while the left ventricle is at rest.
    c. There are two methods of obtaining blood pressure.
      (1) Auscultation: In this case the EMT-Basic will listen for the systolic and diastolic sounds.
      (2) Palpation: In certain situations, the systolic blood pressure may be measured by feeling for return of pulse with deflation of the cuff.
  2. Blood pressure should be measured in all patients older than 3 years of age.
  3. The general assessment of the infant or child patient, such as sick appearing, in respiratory distress, or unresponsive, is more valuable than vital sign numbers.

F. Vital sign reassessment
  1. Vital signs should be assessed and recorded every 15 minutes at a minimum in a stable patient.
  2. Vital signs should be assessed and recorded every 5 minutes in the unstable patient.
  3. Vital signs should be assessed following all medical interventions.

III. Obtain an SAMPLE history.
  - A. Signs/Symptoms
    - 1. Sign - any medical or trauma condition displayed by the patient and identifiable by the EMT-Basic, e.g., Hearing = respiratory distress, Seeing = bleeding, Feeling = skin temperature.
    - 2. Symptom - any condition described by the patient, e.g., shortness of breath.
  - B. Allergies
    - 1. Medications
    - 2. Food
    - 3. Environmental allergies
    - 4. Consider medical identification tag
  - C. Medications
    - 1. Prescription
      - a. Current
      - b. Recent
      - c. Birth control pills
    - 2. Non-prescription
      - a. Current
      - b. Recent
    - 3. Consider medical identification tag
  - D. Pertinent Past History
    - 1. Medical
    - 2. Surgical
    - 3. Trauma
    - 4. Consider medical identification tag
  - E. Last oral intake: Solid or liquid
    - 1. Time
    - 2. Quantity
  - F. Events leading to the injury or illness
    - 1. Chest pain with exertion
    - 2. Chest pain while at rest

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## APPLICATION

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Procedural (How)

1. Demonstrate the skill of assessing breathing.
2. Demonstrate the skill of determining a pulse.

3. Demonstrate the skill of determining skin color, temperature, condition.
4. Demonstrate the skill of determining capillary refill in infants and children.
5. Demonstrate the skill of assessing pupils for size, reactivity and equality.
6. Demonstrate the skill of assessing blood pressure
    a. Auscultation
    b. Palpation
7. Discussion on questioning techniques to obtain history.

### Contextual (When, Where, Why)

Accurate measurement and recording of vital signs over a period of time may indicate a trend in the patient's condition and be valuable in the continuum of care. There are a number of interventions that the EMT-Basic can perform; however, these skills cannot be performed without an accurate set of baseline vital signs. The SAMPLE history is important to guide the pace of the EMT-Basic and assist in the continuum of care at the receiving facility.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Students should hear normal and abnormal breathing.
2. Student should hear with a stethoscope and assess systolic and diastolic pressures.
3. Student should hear 5 components of the SAMPLE history.

### Visual (See)

1. Students should see a simulated or actual patient's chest rise and fall and assess rate and quality of breathing.
2. Students should see appropriate areas of the body to assess the color and condition (and in infants and children < 6 years of age, the capillary refill).
3. Students should see pupils to assess size, reactivity and equality.

### Kinesthetic (Do)

1. Students should practice methods for assessing breathing.
2. Students should practice methods for obtaining a pulse.
3. Students should practice methods for determining skin color, temperature, condition, (and capillary refill in infants and children < 6 years of age).
4. Students should practice methods for determining pupil size, reactivity and equality.
5. Students should practice methods for determining blood pressure by auscultation and palpation.
6. Students should practice methods for obtaining an SAMPLE history.

7. Students should practice completing a prehospital care report including vital signs and SAMPLE history.

### INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

# MODULE 1

## Preparatory

## Lesson 1-6

## Lifting and Moving Patients

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-6.1 Define body mechanics. (C-1)

1-6.2 Discuss the guidelines and safety precautions that need to be followed when lifting a patient.(C-1)

1-6.3 Describe the safe lifting of cots and stretchers.(C-1)

1-6.4 Describe the guidelines and safety precautions for carrying patients and/or equipment.(C-1)

1-6.5 Discuss one-handed carrying techniques.(C-1)

1-6.6 Describe correct and safe carrying procedures on stairs.(C-1)

1-6.7 State the guidelines for reaching and their application. (C-1)

1-6.8 Describe correct reaching for log rolls.(C-1)

1-6.9 State the guidelines for pushing and pulling.(C-1)

1-6.10 Discuss the general considerations of moving patients.(C-1)

1-6.11 State three situations that may require the use of an emergency move.(C-1)

1-6.12 Identify the following patient carrying devices:

- Wheeled ambulance stretcher
- Portable ambulance stretcher
- Stair chair
- Scoop stretcher
- Long spine board
- Basket stretcher
- Flexible stretcher (C-1)

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

1-6.13 Explain the rationale for properly lifting and moving patients.(A-3)

## PSYCHOMOTOR OBJECTIVES

1-6.14 Working with a partner, prepare each of the following devices for use, transfer a patient to the device, properly position the patient on the device, move the device to the ambulance and load the patient into the ambulance:

- Wheeled ambulance stretcher
- Portable ambulance stretcher
- Stair chair
- Scoop stretcher
- Long spine board
- Basket stretcher
- Flexible stretcher (P-1,2)

1-6.15 Working with a partner, the EMT-Basic will demonstrate techniques for the transfer of a patient from an ambulance stretcher to a hospital stretcher.(P-1,2)

## PREPARATION

| | |
|---|---|
| Motivation: | Many EMT-Basics are injured every year because they attempt to lift patients improperly. |
| Prerequisites: | BLS |

### MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to lifting and moving techniques. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met. |
| EMS Equipment: | Wheeled stretcher, stair chair, scoop stretcher, flexible stretcher, ambulance, long and short backboards, bed. |

## PERSONNEL

Primary Instructor: One EMT-Basic instructor knowledgeable in this area.

Assistant Instructor: The instructor-to-student ratio should be 1:6 for psychomotor skills practice. Individuals used as assistant instructors should be knowledgeable about lifting and moving patients.

Recommended Minimum Time to Complete: Three hours

## PRESENTATION

Declarative (What)

I. Body Mechanics
  A. Lifting techniques
    1. Safety precautions
      a. Use legs, not back, to lift.
      b. Keep weight as close to body as possible.
    2. Guidelines for lifting
      a. Consider weight of patient and need for additional help.
      b. Know physical ability and limitations.
      c. Lift without twisting.
      d. Have feet positioned properly.
      e. Communicate clearly and frequently with partner.
    3. Safe lifting of cots and stretchers. When possible use a stair chair instead of a stretcher if medically appropriate.
      a. Know or find out the weight to be lifted.
      b. Use at least two people.
      c. Ensure enough help available. Use an even number of people to lift so that balance is maintained.
        (1) Know or find out the weight limitations of equipment being used.
        (2) Know what to do with patients who exceed weight limitations of equipment.

d. Using power-lift or squat lift position, keep back locked into normal curvature. The power-lift position is useful for individuals with weak knees or thighs. The feet are a comfortable distance apart. The back is tight and the abdominal muscles lock the back in a slight inward curve. Straddle the object. Keep feet flat. Distribute weight to balls of feet or just behind them. Stand by making sure the back is locked in and the upper body comes up before the hips.
e. Use power grip to get maximum force from hands. The palm and fingers come into complete contact with the object and all fingers are bent at the same angles. The power-grip should always be used in lifting. This allows for maximum force to be developed. Hands should be at least 10 inches apart.
f. Lift while keeping back in locked-in position.
g. When lowering cot or stretcher, reverse steps.
h. Avoid bending at the waist.

B. Carrying
1. Precautions for carrying - whenever possible, transport patients on devices that can be rolled.
2. Guidelines for carrying
a. Know or find out the weight to be lifted.
b. Know limitations of the crew's abilities.
c. Work in a coordinated manner and communicate with partners.
d. Keep the weight as close to the body as possible.
e. Keep back in a locked-in position and refrain from twisting.
f. Flex at the hips, not the waist; bend at the knees.
g. Do not hyperextend the back (do not lean back from the waist).
3. Correct carrying procedure
a. Use correct lifting techniques to lift the stretcher.
b. Partners should have similar strength and height.
4. One-handed carrying technique
a. Pick up and carry with the back in the locked-in position.
b. Avoid leaning to either side to compensate for the imbalance.

- 5. Correct carrying procedure on stairs
  - a. When possible, use a stair chair instead of a stretcher.
  - b. Keep back in locked-in position.
  - c. Flex at the hips, not the waist; bend at the knees.
  - d. Keep weight and arms as close to the body as possible.

- C. Reaching
  - 1. Guidelines for reaching
    - a. Keep back in locked-in position.
    - b. When reaching overhead, avoid hyperextended position.
    - c. Avoid twisting the back while reaching.
  - 2. Application of reaching techniques
    - a. Avoid reaching more than 15 - 20 inches in front of the body.
    - b. Avoid situations where prolonged (more than a minute) strenuous effort is needed in order to avoid injury.
  - 3. Correct reaching for log rolls
    - a. Keep back straight while leaning over patient.
    - b. Lean from the hips.
    - c. Use shoulder muscles to help with roll.
- D. Pushing and pulling guidelines
  - 1. Push, rather than pull, whenever possible.
  - 2. Keep back locked-in.
  - 3. Keep line of pull through center of body by bending knees.
  - 4. Keep weight close to the body.
  - 5. Push from the area between the waist and shoulder.
  - 6. If weight is below waist level, use kneeling position.
  - 7. Avoid pushing or pulling from an overhead position if possible.
  - 8. Keep elbows bent with arms close to the sides.

- II. Principles of Moving Patients
  - A. General considerations
    - 1. In general, a patient should be moved immediately (emergency move) only when:
      - a. There is an immediate danger to the patient if not moved.
        - (1) Fire or danger of fire.
        - (2) Explosives or other hazardous materials.
        - (3) Inability to protect the patient from other hazards at the scene.
        - (4) Inability to gain access to other patients in a vehicle who need life-saving care.

b. Life-saving care cannot be given because of the patient's location or position, e.g., a cardiac arrest patient sitting in a chair or lying on a bed.
2. A patient should be moved quickly (urgent move) when there is immediate threat to life.
   a. Altered mental status
   b. Inadequate breathing
   c. Shock (hypoperfusion)
3. If there is no threat to life, the patient should be moved when ready for transportation (non-urgent move).

B. Emergency moves
1. The greatest danger in moving a patient quickly is the possibility of aggravating a spine injury.
2. In an emergency, every effort should be made to pull the patient in the direction of the long axis of the body to provide as much protection to the spine as possible.
3. It is impossible to remove a patient from a vehicle quickly and at the same time provide as much protection to the spine as can be accomplished with an interim immobilization device.
4. If the patient is on the floor or ground, he can be moved by:
   a. Pulling on the patient's clothing in the neck and shoulder area.
   b. Putting the patient on a blanket and dragging the blanket.
   c. Putting the EMT-Basic's hands under the patient's armpits (from the back), grasping the patient's forearms and dragging the patient.

C. Urgent moves
1. Rapid extrication of patient sitting in vehicle
   a. One EMT-Basic gets behind patient and brings cervical spine into neutral in-line position and provides manual immobilization.
   b. A second EMT-Basic applies cervical immobilization device as the third EMT-Basic first places long backboard near the door and then moves to the passenger seat.
   c. The second EMT-Basic supports the thorax as the third EMT-Basic frees the patient's legs from the pedals.
   d. At the direction of the second EMT-Basic, he and the third EMT-Basic rotate the patient in several short, coordinated moves until the patient's back is in the open doorway and his feet are on the passenger seat.

        e. Since the first EMT-Basic usually cannot support the patient's head any longer, another available EMT-Basic or a bystander supports the patient's head as the first EMT-Basic gets out of the vehicle and takes support of the head outside of the vehicle.
        f. The end of the long backboard is placed on the seat next to the patient's buttocks. Assistants support the other end of the board as the first EMT-Basic and the second EMT-Basic lower the patient onto it.
        g. The second EMT-Basic and the third EMT-Basic slide the patient into the proper position on the board in short, coordinated moves.
        h. Several variations of the technique are possible, including assistance from bystanders. Must be accomplished without compromise to the spine.

D. Non-urgent moves
    1. Direct ground lift (no suspected spine injury)
        a. Two or three rescuers line up on one side of the patient.
        b. Rescuers kneel on one knee (preferably the same for all rescuers).
        c. The patient's arms are placed on his chest if possible.
        d. The rescuer at the head places one arm under the patient's neck and shoulder and cradles the patient's head. He places his other arm under the patient's lower back.
        e. The second rescuer places one arm under the patient's knees and one arm above the buttocks.
        f. If a third rescuer is available, he should place both arms under the waist and the other two rescuers slide their arms either up to the mid-back or down to the buttocks as appropriate.
        g. On signal, the rescuers lift the patient to their knees and roll the patient in toward their chests.
        h. On signal, the rescuers stand and move the patient to the stretcher.
        i. To lower the patient, the steps are reversed.
    2. Extremity lift (no suspected extremity injuries)
        a. One rescuer kneels at the patient's head and one kneels at the patient's side by his knees.

b. The rescuer at the head places one hand under each of the patient's shoulders while the rescuer at the foot grasps the patient's wrists.
c. The rescuer at the head slips his hands under the patient's arms and grasps the patient's wrists.
d. The rescuer at the patient's foot slips his hands under the patient's knees.
e. Both rescuers move up to a crouching position.
f. The rescuers stand up simultaneously and move with the patient to a stretcher.

3. Transfer of supine patient from bed to stretcher
    a. Direct carry
        (1) Position cot perpendicular to bed with head end of cot at foot of bed.
        (2) Prepare cot by unbuckling straps and removing other items.
        (3) Both rescuers stand between bed and stretcher, facing patient.
        (4) First rescuer slides arm under patient's neck and cups patient's shoulder.
        (5) Second rescuer slides hand under hip and lifts siightly.
        (6) First rescuer slides other arm under patient's back.
        (7) Second rescuer places arms underneath hips and calves.
        (8) Rescuers slide patient to edge of bed.
        (9) Patient is lifted/curled toward the rescuers' chests.
        (10) Rescuers rotate and place patient gently onto cot.
    b. Draw sheet method
        (1) Loosen bottom sheet of bed.
        (2) Position cot next to bed.
        (3) Prepare cot: Adjust height, lower rails, unbuckle straps.
        (4) Reach across cot and grasp sheet firmly at patient's head, chest, hips and knees.
        (5) Slide patient gently onto cot.

- III. Equipment
  - A. Stretchers/cots
    - 1. Types
      - a. Wheeled stretcher
        - (1) Most commonly used device
        - (2) Rolling
          - (a) Restricted to smooth terrain.
          - (b) Foot end should be pulled.
          - (c) One person must guide the stretcher at head.
        - (3) Carrying
          - (a) Two rescuers
            - i) Preferable in narrow spaces, but requires more strength.
            - ii) Easily unbalanced.
            - iii) Rescuers should face each other from opposite ends of stretcher.
          - (b) Four rescuers
            - i) One rescuer at each corner.
            - ii) More stability and requires less strength.
            - iii) Safer over rough terrain.
        - (4) Loading into ambulance
          - (a) Use sufficient lifting power.
          - (b) Load hanging stretchers before wheeled stretchers.
          - (c) Follow manufacturer's directions.
          - (d) Ensure all cots and patients secured before moving ambulance.
      - b. Portable stretcher
      - c. Stair chair
      - d. Backboards
        - (1) Long
          - (a) Traditional wooden device
          - (b) Manufactured varieties
        - (2) Short
          - (a) Traditional wooden device
          - (b) Vest type device
      - e. Scoop or orthopedic stretcher
      - f. Flexible stretcher

2. Maintenance - follow manufacturer's directions for inspection, cleaning, repair and upkeep.

B. Patient positioning
   1. An unresponsive patient without suspected spine injury should be moved into the recovery position by rolling the patient onto his side (preferably the left) without twisting the body.
   2. A patient with chest pain or discomfort or difficulty breathing should sit in a position of comfort as long as hypotension is not present.
   3. A patient with suspected spine injury should be immobilized on a long backboard.
   4. A patient in shock (hypoperfusion) should have his legs elevated 8 - 12 inches.
   5. For the pregnant patient with hypotension, an early intervention is to position the patient on her left side.
   6. A patient who is nauseated or vomiting should be transported in a position of comfort; however, the EMT-Basic should be positioned appropriately to manage the airway.

## APPLICATION

### Procedural (how)

1. Show examples of proper lifting.
2. Show examples of proper carrying.
3. Show examples of proper reaching.
4. Show examples of situations where emergency moves are appropriate.
5. Show examples of situations where urgent moves are appropriate.
6. Show examples of situations where non-urgent moves are appropriate.
7. Demonstrate emergency moves.
8. Demonstrate urgent moves.
9. Demonstrate non-urgent moves.
10. Demonstrate transfer of patient to stretcher.
11. Show examples of different types of carrying devices.
12. Demonstrate knowledge of appropriate selection of each carrying device.
12. Demonstrate carrying a patient on a stretcher.
13. Demonstrate loading a patient on a stretcher into an ambulance.
14. Demonstrate use of a stair chair.
15. Demonstrate use of a scoop stretcher.

16. Demonstrate positioning patients with different conditions.
    A. Unresponsiveness
    B. Chest pain/discomfort or difficulty breathing
    C. Suspected spine injury
    D. Shock (hypoperfusion)
    E. Patients who are vomiting or nauseous
    F. Pregnant patient

Contextual (When, Where, Why)

When to transport a patient is determined by both the patient's condition and the environment in which he is found. The determination of how to transport the patient is made by considering his complaint, the severity of his condition and his location.

## STUDENT ACTIVITIES

### Auditory (Hear)

None identified for this lesson.

### Visual (See)

1. The student should see proper lifting techniques.
2. The student should see proper carrying techniques.
3. The student should see proper reaching techniques.
4. The student should see situations where emergency moves are appropriate.
5. The student should see situations where urgent moves are appropriate.
6. The student should see situations where non-urgent moves are appropriate.
7. The student should see emergency moves.
8. The student should see urgent moves.
9. The student should see non-urgent moves.
10. The student should see a patient transferred to a stretcher.
11. The student should see different types of carrying devices.
12. The student should see a patient carried on a stretcher.
13. The student should see a patient on a stretcher loaded into an ambulance.
14. The student should see a stair chair used.
15. The student should see a scoop stretcher used.
16. The student should see patients with different conditions positioned properly.
    A. Unresponsiveness
    B. Chest pain/discomfort or difficulty breathing
    C. Suspected spine injury
    D. Shock (hypoperfusion)
    E. Patients who are vomiting or nauseous

    F. Pregnant patient

### Kinesthetic (Do)

1. The student should practice proper lifting techniques.
2. The student should practice proper carrying techniques.
3. The student should practice proper reaching techniques.
4. The student should practice determining whether emergency, urgent or non-emergency moves are appropriate.
5. The student should practice emergency moves.
6. The student should practice urgent moves.
7. The student should practice non-urgent moves.
8. The student should practice transferring a patient to a stretcher.
9. The student should practice carrying a patient on a stretcher.
10. The student should practice loading a patient on a stretcher into an ambulance.
11. The student should practice using a stair chair.
12. The student should practice using a scoop stretcher.
13. The student should practice positioning patients with different conditions.
    A. Unresponsiveness
    B. Chest pain/discomfort or difficulty breathing
    C. Suspected spine injury
    D. Shock (hypoperfusion)
    E. Patients who are vomiting or nauseous
    F. Pregnant patients

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-Basic students during role play, practice, or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

G.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's guide and attach with lesson plan.

# MODULE 3

## Patient Assessment

## Lesson 3-2

## Initial Assessment

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-2.1 Summarize the reasons for forming a general impression of the patient.(C-1)
3-2.2 Discuss methods of assessing altered mental status.(C-1)
3-2.3 Differentiate between assessing the altered mental status in the adult, child and infant patient.(C-3)
3-2.4 Discuss methods of assessing the airway in the adult, child and infant patient.(C-1)
3-2.5 State reasons for management of the cervical spine once the patient has been determined to be a trauma patient.(C-1)
3-2.6 Describe methods used for assessing if a patient is breathing.(C-1)
3-2.7 State what care should be provided to the adult, child and infant patient with adequate breathing.(C-1)
3-2.8 State what care should be provided to the adult, child and infant patient without adequate breathing.(C-1)
3-2.9 Differentiate between a patient with adequate and inadequate breathing.(C-3)
3-2.10 Distinguish between methods of assessing breathing in the adult, child and infant patient.(C-3)
3-2.11 Compare the methods of providing airway care to the adult, child and infant patient.(C-3)
3-2.12 Describe the methods used to obtain a pulse.(C-1)
3-2.13 Differentiate between obtaining a pulse in an adult, child and infant patient.(C-3)
3-2.14 Discuss the need for assessing the patient for external bleeding.(C-1)

3-2.15 Describe normal and abnormal findings when assessing skin color.(C-1)
3-2.16 Describe normal and abnormal findings when assessing skin temperature.(C-1)
3-2.17 Describe normal and abnormal findings when assessing skin condition.(C-1)
3-2.18 Describe normal and abnormal findings when assessing skin capillary refill in the infant and child patient.(C-1)
3-2.19 Explain the reason for prioritizing a patient for care and transport.(C-1)

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-2.20 Explain the importance of forming a general impression of the patient.(A-1)
3-2.21 Explain the value of performing an initial assessment.(A-2)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-2.22 Demonstrate the techniques for assessing mental status.(P-1,2)
3-2.23 Demonstrate the techniques for assessing the airway.(P-1,2)
3-2.24 Demonstrate the techniques for assessing if the patient is breathing.(P-1,2)
3-2.25 Demonstrate the techniques for assessing if the patient has a pulse.(P-1,2)
3-2.26 Demonstrate the techniques for assessing the patient for external bleeding.(P-1,2)
3-2.27 Demonstrate the techniques for assessing the patient's skin color, temperature, condition and capillary refill (infants and children only).(P-1,2)
3-2.28 Demonstrate the ability to prioritize patients.(P-1,2)

## PREPARATION

Motivation: The EMT-Basic will encounter patients who require emergency medical care. It is important for the EMT-Basic to identify those patients who require rapid assessment critical interventions, and immediate transport.

Following the initial assessment, the EMT-B will use information obtained during this phase with the appropriate history and physical examination.

| | |
|---|---|
| Prerequisites: | BLS, Preparatory, and Airway. |

## MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to patient assessment. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met. |
| EMS Equipment: | Exam gloves, airway management equipment. |

## PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in patient assessment. |
| Assistant Instructor: | The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable about patient assessment. |
| Recommended Minimum Time to Complete: | One hour |

## PRESENTATION

### Declarative (What)

I. General Impression of the Patient
    A. Definition
        1. The general impression is formed to determine priority of care and is based on the EMT-Basic's immediate assessment of the environment and the patient's chief complaint.
        2. Determine if ill, i.e., medical or injured (trauma). If injured, identify mechanism of injury.
        3. Age

- 4. Sex
- 5. Race

B. Assess patient and determine if the patient has a life threatening condition.
- 1. If a life threatening condition is found, treat immediately.
- 2. Assess nature of illness or mechanism of injury.

II. Assess Patient's Mental Status. Maintain Spinal Immobilization if Needed.

- A. Begin by speaking to the patient. State name, tell the patient that you are an emergency medical technician, and explain that you are here to help.
- B. Levels of mental status
  - 1. Alert
  - 2. Responds to Verbal stimuli.
  - 3. Responds to Painful stimuli.
  - 4. Unresponsive - no gag or cough

III. Assess the Patient's Airway Status.

- A. Responsive patient - Is the patient talking or crying?
  - 1. If yes, assess for adequacy of breathing.
  - 2. If no, open airway.
- B. Unresponsive patient - Is the airway open?
  - 1. Open the airway. Positioning is patient, age, and size specific.
    - a. For medical patients, perform the head-tilt chin-lift.
      - (1) Clear
      - (2) Not clear - Clear the airway.
    - b. For trauma patients or those with unknown nature of illness, the cervical spine should be stabilized/immobilized and the jaw thrust maneuver performed.
      - (1) Clear
      - (2) Not clear - Clear the airway.

IV. Assess the Patient's Breathing.

- A. If breathing is adequate and the patient is responsive, oxygen may be indicated.
- B. All responsive patients breathing <24 breaths per minute or <8 breaths per minute should receive high flow oxygen (defined as a 15 LPM nonrebreather mask).
- C. If the patient is unresponsive and the breathing is adequate, open and maintain the airway and provide high concentration oxygen.
- D. If the breathing is inadequate, open and maintain the airway, assist the patient's breathing and utilize ventilatory adjuncts. In all cases oxygen should be used.

- E. If the patient is not breathing, open and maintain the airway and ventilate using ventilatory adjuncts. In all cases oxygen should be used.

V. Assess the Patient's Circulation.
- A. Assess the patient's pulse.
  - 1. The circulation is assessed by feeling for a radial pulse.
    - a. In a patient one year old or less, palpate a brachial pulse.
    - b. If no radial pulse is felt, palpate carotid pulse.
      - (1) If pulseless, medical patient >12 years old, start CPR and apply automated external defibrillator (AED).
      - (2) Medical patient < 12 years old, start CPR.
      - (3) Trauma patient, start CPR.
- B. Assess if major bleeding is present. If bleeding is present, control bleeding.
- C. Assess the patient's perfusion by evaluating skin color and temperature.
  - 1. The patient's skin color is assessed by looking at the nail beds, lips and eyes.
    - a. Normal - pink
    - b. Abnormal conditions
      - (1) Pale
      - (2) Cyanotic or blue-gray
      - (3) Flushed or red
      - (4) Jaundice or yellow
  - 2. Assess the patient's skin temperature by feeling the skin.
    - a. Normal - warm
    - b. Abnormal skin temperatures
      - (1) Hot
      - (2) Cool
      - (3) Cold
      - (4) Clammy - cool & moist
  - 3. Assess the patient's skin condition. This is an assessment of the amount of moisture on the skin.
    - a. Normal - dry
    - b. Abnormal - moist or wet
  - 4. Assess capillary refill in infant and child patients.
    - a. Normal capillary refill is less than two seconds.
    - b. Abnormal capillary refill is greater than two seconds.

VI. Identify Priority Patients.
- A. Consider:

        1. Poor general impression
        2. Unresponsive patients - no gag or cough
        3. Responsive, not following commands
        4. Difficulty breathing
        5. Shock (hypoperfusion)
        6. Complicated childbirth
        7. Chest pain with BP $<100$ systolic
        8. Uncontrolled bleeding
        9. Severe pain anywhere
    B. Expedite transport of the patient. Consider ALS back up.

VII. Proceed to the appropriate focused history and physical examination.

## APPLICATION

### Procedural (How)

1. Review airway patency, breathing and oxygen delivery.
2. Review methods of assessing mental status.
3. Demonstrate obtaining radial, carotid, and brachial pulses.
4. Show assessment and control of major external bleeding.
5. Demonstrate assessment of skin color, temperature and capillary refill.

### Contextual (When, Where, Why)

Perform initial assessment on all patients after assuring scene and personal safety. If the scene is safe and the environment permits, perform the assessment prior to moving the patient. The initial assessment is a rapid means of assessing patient condition and priorities of care.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Students should hear recordings of various patient situations to listen for clues concerning the general impression.
2. Students should hear normal and abnormal airway noises.
3. Students should hear breathing.

### Visual (See)

1. Students should see audio-visual aids or materials of various patients situations.
2. Students should see breathing while an initial assessment is being performed.

3. Students should see appropriate landmarks for assessing pulses.
4. Students should see examples of major bleeding.
5. Students should see normal skin color and condition.
6. Students should see how to control major bleeding.
7. Students should see the flow chart from Appendix I.

### Kinesthetic (Do)

1. Students should practice establishing mental status on programmed patients (fellow students) with various altered mental statuses.
2. Students should practice airway opening techniques on manikins and each other.
3. Students should practice assessing breathing.
4. Students should practice assessing pulses.
5. Students should practice assessing for major bleeding.
6. Students should practice assessing skin color, temperature and condition.
7. Students should practice assessing capillary refill.
8. Students should practice recording assessment findings.
9. Students should use the flow chart from Appendix I.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 3

# Patient Assessment

## Lesson 3-3

## Focused History and Physical Exam: Trauma

# OBJECTIVES

## OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

## COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-3.1 Discuss the reasons for reconsideration concerning the mechanism of injury.(C-1)
3-3.2 State the reasons for performing a rapid trauma assessment.(C-1)
3-3.3 Recite examples and explain why patients should receive a rapid trauma assessment.(C-1)
3-3.4 Describe the areas included in the rapid trauma assessment and discuss what should be evaluated.(C-1)
3-3.5 Differentiate when the rapid assessment may be altered in order to provide patient care. (C-3)
3-3.6 Discuss the reason for performing a focused history and physical exam.(C-1)

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-3.7 Recognize and respect the feelings that patients might experience during assessment.(A-1)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-3.8 Demonstrate the rapid trauma assessment that should be used to assess a patient based on mechanism of injury.(P-1,2)

## PREPARATION

| | |
|---|---|
| Motivation: | With trauma patients, it is important for the EMT-Basic student to separate those patients who require rapid assessment and critical interventions, from those patients who can be managed using components of the focused assessment. |
| Prerequisite Skills: | BLS, Preparatory, and Airway. |

### MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to the history and physical exam of trauma patients. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met. |
| EMS Equipment: | Exam gloves, stethoscope (dual and single head)(1:6), blood pressure cuffs (adult, child and infant)(1:6), penlight (1:6). |

### PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor, knowledgeable in patient assessment. |
| Assistant Instructor: | The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in assessing the history and physical exam of the trauma patient. |
| Recommended Minimum Time to Complete: | Four hours |

## PRESENTATION

### Declarative (What)

I. Re-consider Mechanism of Injury
  A. Significant mechanism of injury
    1. Ejection from vehicle
    2. Death in same passenger compartment
    3. Falls > 20 feet
    4. Roll-over of vehicle
    5. High-speed vehicle collision
    6. Vehicle-pedestrian collision
    7. Motorcycle crash
    8. Unresponsive or altered mental status
    9. Penetrations of the head, chest, or abdomen
    10. Hidden injuries
      a. Seat belts
        (1) If buckled, may have produced injuries.
        (2) If patient had seat belt on, it does not mean they do not have injuries.
      b. Airbags
        (1) May not be effective without seat belt.
        (2) Patient can hit wheel after deflation.
        (3) Lift the deployed airbag and look at the steering wheel for deformation.
          (a) "Lift and look" under the bag after the patient has been removed.
          (b) Any visible deformation of the steering wheel should be regarded as an indicator of potentially serious internal injury, and appropriate action should be taken.
  B. Infant and child considerations
    1. Falls >10 feet
    2. Bicycle collision
    3. Vehicle in medium speed collision

II. Perform rapid trauma assessment on patients with significant mechanism of injury to determine life threatening injuries. In the responsive patient, symptoms should be sought before and during the trauma assessment.
  A. Continue spinal stabilization.
  B. Consider ALS request.

C. Reconsider transport decision.
D. Assess mental status.
E. As you inspect and palpate, look and feel for the following examples of injuries or signs of injury:
   1. Deformities
   2. Contusions
   3. Abrasions
   4. Punctures/penetrations
   5. Burns
   6. Tenderness
   7. Lacerations
   8. Swelling
F. Assess the head, inspect and palpate for injuries or signs of injury.
   1. Deformities
   2. Contusions
   3. Abrasions
   4. Punctures/penetrations
   5. Burns
   6. Tenderness
   7. Lacerations
   8. Swelling
   9. Crepitation
G. Assess the neck, inspect and palpate for injuries or signs of injury.
   1. Deformities
   2. Contusions
   3. Abrasions
   4. Punctures/penetrations
   5. Burns
   6. Tenderness
   7. Lacerations
   8. Swelling
   9. Jugular vein distension (JVD)
   10. Crepitation
H. Apply cervical spinal immobilization collar (CSIC). May use information from the head injury lesson at this time.
I. Assess the chest, inspect and palpate for:
   1. Injuries or signs of injury
   2. Deformities
   3. Contusions
   4. Abrasions
   5. Punctures/penetrations

6. Burns
7. Tenderness
8. Lacerations
9. Swelling
10. Paradoxical motion
11. Crepitation
12. Breath sounds in the apices, mid-clavicular line, bilaterally and at the bases, mid-axillary line, bilaterally
    a. Present
    b. Absent
    c. Equal

J. Assess the abdomen, inspect and palpate for injuries or signs of injury.
    1. Deformities
    2. Contusions
    3. Abrasions
    4. Punctures/penetrations
    5. Burns
    6. Tenderness
    7. Lacerations
    8. Swelling
    9. Firm
    10. Soft
    11. Distended

K. Assess the pelvis, inspect and palpate for injuries or signs of injury.
    1. Deformities
    2. Contusions
    3. Abrasions
    4. Punctures/penetrations
    5. Burns
    6. Tenderness
    7. Lacerations
    8. Swelling
    9. If no pain is noted, gently compress the pelvis to determine tenderness or motion.

L. Assess all four extremities, inspect and palpate for injuries or signs of injury.
    1. Deformities
    2. Contusions
    3. Abrasions
    4. Punctures/penetrations

5. Burns
6. Tenderness
7. Lacerations
8. Swelling
9. Distal pulse
10. Sensation
11. Motor function

- M. Roll patient with spinal precautions and assess posterior body, inspect and palpate, examining for injuries or signs of injury.
- N. Assess baseline vital signs.
- O. Assess SAMPLE history.
- III. For patients with no significant mechanism of injury, e.g., cut finger
  - A. Perform focused history and physical exam of injuries based on the components of the rapid assessment. The focused assessment is performed on the specific injury site.
  - B. Assess baseline vital signs.
  - C. Assess SAMPLE history.

## APPLICATION

### Procedural (How)

The assessment is completed by visually inspecting, physically palpating and auscultating, and verbally communicating with the patient and family. The assessment is an input/output process, where the assessment findings are the input and the treatment is the output.

1. Review of scene size-up.
2. Review of the initial assessment.
3. Students should be shown audio-visual aids or materials of various trauma scenes to evaluate the mechanism of injury.
4. Demonstrate a rapid patient assessment.

### Contextual (When, Where, Why)

The history and physical exam are performed following the initial assessment and correction of immediate threats to life. During this process, obtain additional information regarding the patient's condition.

This assessment may be performed at the same location as the initial assessment, unless the scene or patient's condition requires movement.

This assessment is the second hands-on approach to gain information to continue providing patient care, managing life threats, and making a transport decision.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Students should hear information input from a simulated patient or others regarding signs and symptoms for patients that are unresponsive.
2. Students should hear the presence of breath sounds on fellow students.

### Visual (See)

1. Students should see audio-visual aids or materials of various injuries.
2. Students should see the inspection and palpation of programmed patients for various injuries and patterns of injury.
3. Students should see landmarks for auscultation of breath sounds.
4. Students should see landmarks for palpation and inspection.
5. Students should see the sizing and application of cervical spine immobilization devices.
6. Students should see how the pupils of the eye normally react to light.
7. Students should see the flow chart from Appendix I.

### Kinesthetic (Do)

1. Students should practice performing the skills of inspection, palpation, and auscultation.
2. Students should practice measuring and applying cervical spine immobilization devices.
3. Students should practice recording assessment findings for a trauma patient.
4. Students should use the flow chart from Appendix I.
5. The student should practice doing the focused history and physical exam learned in this lesson.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 3

# Patient Assessment

## Lesson 3-5

## Detailed Physical Exam

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-5.1 Discuss the components of the detailed physical exam.(C-1)
3-5.2 State the areas of the body that are evaluated during the detailed physical exam.(C-1)
3-5.3 Explain what additional care should be provided while performing the detailed physical exam.(C-1)
3-5.4 Distinguish between the detailed physical exam that is performed on a trauma patient and that of the medical patient.(C-3)

### AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-5.5 Explain the rationale for the feelings that these patients might be experiencing.(A-3)

### PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-5.6 Demonstrate the skills involved in performing the detailed physical exam.(P-1,2)

## PREPARATION

| | |
|---|---|
| Motivation: | The entire basis for the EMT-Basic's emergency medical care is the assessment findings. In the detailed physical exam, the EMT-Basic will continue to assess the patient, allowing for continued care. |
| Prerequisites: | BLS, Preparatory and Airway. |

### MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to the detailed physical exam. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met. |
| EMS Equipment: | Exam gloves, stethoscope (dual and single head)(1:6), blood pressure cuffs (adult, child and infant)(1:6), penlight (1:6). |

### PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor with knowledge in patient assessment. |
| Assistant Instructor: | The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in assessing a detailed physical exam. |
| Recommended Minimum Time to Complete: | One hour |

## PRESENTATION

### Declarative (What)

I. Detailed Physical Exam
    A. Patient and injury specific, e.g., cut finger would not require the detailed physical exam.
    B. Perform a detailed physical examination on the patient to gather additional information.
        1. As you inspect and palpate, look and/or feel for the following examples of injuries or signs of injury:
            a. Deformities
            b. Contusions
            c. Abrasions
            d. Punctures/penetrations
            e. Burns
            f. Tenderness
            g. Lacerations
            h. Swelling
        2. Assess the head, inspect and palpate for injuries or signs of injury.
            a. Deformities
            b. Contusions
            c. Abrasions
            d. Punctures/penetrations
            e. Burns
            f. Tenderness
            g. Lacerations
            h. Swelling
        3. Assess the face, inspect and palpate for injuries or signs of injury.
            a. Deformities
            b. Contusions
            c. Abrasions
            d. Punctures/penetrations
            e. Burns
            f. Tenderness
            g. Lacerations
            h. Swelling

4. Assess the ears, inspect and palpate for injuries or signs of injury .
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Drainage
5. Assess the eyes, inspect for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Discoloration
    j. Unequal pupils
    k. Foreign bodies
    l. Blood in anterior chamber
6. Assess the nose, inspect and palpate for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Drainage
    j. Bleeding
7. Assess the mouth, inspect for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations

    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Teeth
    j. Obstructions
    k. Swollen or lacerated tongue
    l. Odors
    m. Discoloration

8. Assess the neck, inspect and palpate for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Jugular vein distension
    j. Crepitance
9. Assess the chest, inspect and palpate for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Crepitance
    j. Paradoxical motion
    k. Breath sounds in the apices, mid-clavicular line, bilaterally and at the bases, mid-axillary line, bilaterally.
        (1) Present
        (2) Absent
        (3) Equal
10. Assess the abdomen, inspect and palpate for injuries or signs of injury.
    a. Deformities

    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Firm
    j. Soft
    k. Distended

11. Assess the pelvis, inspect and palpate for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. If the patient does not complain of pain or is unresponsive, gently flex and compress the pelvis to determine stability.
12. Assess all four extremities, inspect and palpate for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions
    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling
    i. Distal pulses
    j. Sensation
    k. Motor function
13. Roll with spinal precautions and assess posterior aspect of body, inspect and palpate for injuries or signs of injury.
    a. Deformities
    b. Contusions
    c. Abrasions

    d. Punctures/penetrations
    e. Burns
    f. Tenderness
    g. Lacerations
    h. Swelling

II. Assess Baseline Vital Signs.

## APPLICATION

### Procedural (How)

The physical assessment is completed by visual inspection and palpation. The assessment is an input/output process, where the assessment findings are the input and the treatment is the output.

### Contextual (When, Where, Why)

The detailed physical exam is performed following the focused history and physical exam. It will be performed after all critical interventions have been completed. It is situation and time dependent. Depending upon the severity of the patient's injury or illness, this assessment may not be completed. During this process, additional information regarding the patient's condition is obtained.

Typically this assessment will be performed while en route to the receiving facility.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Students should hear information (clues) from the responsive or altered mental status patient regarding symptoms.

### Visual (See)

1. Students should see audio-visual aids or materials of various injuries.
2. Students should see the inspection and palpation of programmed patients for various injuries and illnesses.
3. Students should see landmarks for auscultation of breath sounds.
4. Students should see landmarks for palpation and inspection.
5. Students should see the flow chart from Appendix I.

### Kinesthetic (Do)

1. Students should practice performing the skills of inspection, palpation, and auscultation of the detailed physical exam.
2. Students should use the flow chart from Appendix I.

### INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 3

## Patient Assessment

## Lesson 3-7

## Communications

# OBJECTIVES

## OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

## COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-7.1 List the proper methods of initiating and terminating a radio call.(C-1)
3-7.2 State the proper sequence for delivery of patient information.(C-1)
3-7.3 Explain the importance of effective communication of patient information in the verbal report.(C-1)
3-7.4 Identify the essential components of the verbal report.(C-1)
3-7.5 Describe the attributes for increasing effectiveness and efficiency of verbal communications.(C-1)
3-7.6 State legal aspects to consider in verbal communication.(C-1)
3-7.7 Discuss the communication skills that should be used to interact with the patient.(C-1)
3-7.8 Discuss the communication skills that should be used to interact with the family, bystanders, individuals from other agencies while providing patient care and the difference between skills used to interact with the patient and those used to interact with others.(C-1)
3-7.9 List the correct radio procedures in the following phases of a typical call:(C-1)

- To the scene.
- At the scene.
- To the facility.
- At the facility.
- To the station.
- At the station.

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-7.10 Explain the rationale for providing efficient and effective radio communications and patient reports.(A-3)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-7.11 Perform a simulated, organized, concise radio transmission.(P-2)

3-7.12 Perform an organized, concise patient report that would be given to the staff at a receiving facility.(P-2)

3-7.13 Perform a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT-Basic was already providing care.(P-2)

## PREPARATION

Motivation: The best prehospital patient care may come to an end at the door of the Emergency Department (ED) if a patient's condition is not described well enough for the ED staff to prepare.

Communication is an essential component of prehospital care. Both verbal and written communications will be used during every response. Patient care not only includes assessment and treatment, but the ability to effectively and efficiently communicate findings to other health care providers.

Prerequisites: BLS, Preparatory and Airway.

## MATERIALS

AV Equipment: Utilize various audio-visual materials relating to communications. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met.

EMS Equipment: None

## PERSONNEL

Primary Instructor: One EMT-Basic instructor knowledgeable in this area.

Assistant Instructor: The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in communications.

Recommended Minimum Time to Complete: One hour

## PRESENTATION

Declarative (What)

I. Communication
  A. Communication system
    1. System components
      a. Base station - a radio which is located at a stationary site such as a hospital, mountain top, or public safety agency.
      b. Mobile two-way radios (transmitter/receivers)
        (1) Implies a vehicular mounted device.
        (2) Mobile transmitters usually transmit at lower power than base stations (typically 20 - 50 watts).
        (3) Typical transmission range is 10 - 15 miles over average terrain.
      c. Portable radios (transmitter/receivers)
        (1) Implies a handheld device.
        (2) Typically have power output of 1 - 5 watts, limiting their range.
      d. Repeater/base station - receives a transmission from a low-power portable or mobile radio on one frequency and retransmits at a higher power on another frequency.
      e. Digital radio equipment
      f. Cellular telephones
    2. Radio communications
      a. Radio frequencies - assigned and licensed by the Federal Communication Commission (FCC).

- b. Response to the scene
    - (1) The dispatcher needs to be notified that the call was received.
    - (2) Dispatch needs to know that the unit is en route.
    - (3) Other agencies should be notified as appropriate, e.g., local hospital.
- c. Arrival at the scene - the dispatcher must be notified.

3. Communication with medical direction
    - a. In some systems, medical direction is at the receiving facility. In others, medical direction is at a separate site.
    - b. In either case, EMT-Basics may need to contact medical direction for consultation and to get orders for administration of medications. Radio transmissions need to be organized, concise and pertinent.
    - c. Since the physician will determine whether to order medications and procedures based on the information given by the EMT-Basic, this information must be accurate.
    - d. After receiving an order for a medication or procedure (or denial of such a request), repeat the order back word for word.
    - e. Orders that are unclear or appear to be inappropriate should be questioned.
    - f. Communication with receiving facilities
    - g. EMT-Basics provide information that allows hospitals to prepare for a patient's arrival by having the right room, equipment and personnel prepared.
    - h. Patient reporting concepts
        - (1) When speaking on the radio, keep these principles in mind:
            - (a) Radio is on and volume is properly adjusted.
            - (b) Listen to the frequency and ensure it is clear before beginning a transmission.
            - (c) Press the "press to talk" (PTT) button on the radio and wait for one second before speaking.
            - (d) Speak with lips about 2 to 3 inches from the microphone.
            - (e) Address the unit being called, then give the name of the unit (and number if appropriate) where the transmission is originating from.

(f) The unit being called will signal that the transmission should start by saying "go ahead" or some other term standard for that area. A response of "stand by" means wait until further notice.

(g) Speak clearly and slowly, in a monotone voice.

(h) Keep transmissions brief. If, on occasion, a transmission takes longer than 30 seconds, stop at that point and pause for a few seconds so that emergency traffic can use the frequency if necessary.

(i) Use clear text.

(j) Avoid codes.

(k) Avoid meaningless phrases like "Be advised."

(l) Courtesy is assumed, so there is no need to say "please," "thank you" and "you're welcome."

(m) When transmitting a number that might be confused (e.g., a number in the teens), give the number, then give the individual digits.

(n) The airwaves are public and scanners are popular. EMS transmissions may be overheard by more than just the EMS community. Do not give a patient's name over the air.

(o) For the same reason, be careful to remain objective and impartial in describing patients. An EMT-Basic may be sued for slander if he injures someone's reputation in this way.

(p) An EMT-Basic rarely acts alone: Use "we" instead of "I."

(q) Do not use profanity on the air. The FCC takes a dim view of such language and may impose substantial fines.

(r) Avoid words that are difficult to hear like "yes" and "no." Use "affirmative" and "negative."

    (s) Use the standard format for transmission of information.
    (t) When the transmission is finished, indicate this by saying "over." Get confirmation that the message was received.
    (u) Avoid codes, especially those that are not standardized.
    (v) Avoid offering a diagnosis of the patient's problem.
    (w) Use EMS frequencies only for EMS communication.
    (x) Reduce background noise as much as possible by closing the window.
(2) Notify the dispatcher when the unit leaves the scene.
(3) When communicating with medical direction or the receiving facility, a verbal report should be given. The essential elements of such a report, in the order they should be given, are:
    (a) Identify unit and level of provider (who and what)
    (b) Estimated time of arrival
    (c) Patient's age and sex
    (d) Chief complaint
    (e) Brief, pertinent history of the present illness
    (f) Major past illnesses
    (g) Mental status
    (h) Baseline vital signs
    (i) Pertinent findings of the physical exam
    (j) Emergency medical care given
    (k) Response to emergency medical care
(4) After giving this information, the EMT-Basic will continue to assess the patient. Additional vital signs may be taken and new information may become available, particularly on long transports. In some systems, this information should be relayed to the hospital (see local protocol). Information that must be transmitted includes deterioration in the patient's condition.
(5) Arrival at the hospital
    (a) The dispatcher must be notified.

        (b) In some systems, the hospital should also be notified.
      (6) Leaving the hospital for the station - the dispatcher should be notified.
      (7) Arrival at the station - the dispatcher should be notified.
  4. System maintenance
    a. Communication equipment needs to be checked periodically by a qualified technician, e.g., to ensure that a radio is not drifting from its assigned frequency.
    b. As technology changes, new equipment becomes available that may have a role in EMS systems, e.g., cellular phones.
    c. Since EMT-Basics may need to be able to consult on-line medical direction, an EMS system must provide a back-up in case the usual procedures do not work.

B. Verbal communication
  1. After arrival at the hospital, give a verbal report to the staff.
    a. Introduce the patient by name (if known).
    b. Summarize the information given over the radio:
      (1) Chief complaint
      (2) History that was not given previously
      (3) Additional treatment given en route
      (4) Additional vital signs taken en route
    c. Give additional information that was collected but not transmitted.

C. Written communication - this is covered in the lesson on documentation.

D. Interpersonal communication
  1. Make and keep eye contact with the patient.
  2. When practical, position yourself at a level lower than the patient.
  3. Be honest with the patient.
  4. Use language the patient can understand.
  5. Be aware of your own body language.
  6. Speak clearly, slowly and distinctly.
  7. Use the patient's proper name, either first or last, depending on the circumstances. Ask the patient what he wishes to be called.
  8. If a patient has difficulty hearing, speak clearly with lips visible.

        9. Allow the patient enough time to answer a question before asking the next one.
        10. Act and speak in a calm, confident manner.
    E. Communication with hearing impaired, non-English speaking populations, use of interpreters, etc.
    F. Communication with elderly
        1. Potential for visual deficit
        2. Potential for auditory deficit

## APPLICATION

### Procedural (How)

1. Show how to initiate and terminate a radio call.
2. Demonstrate use of the radio in the different phases of a typical call.
    - To the scene.
    - At the scene.
    - To the facility.
    - At the facility.
    - To the station.
    - At the station.
3. Demonstrate the proper sequence of patient information.
4. Demonstrate how to communicate with a patient.
5. Demonstrate how to communicate with a patient's family.
6. Demonstrate how to communicate with bystanders.
7. Demonstrate how to communicate with individuals from other agencies while providing patient care.
8. Demonstrate a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT-Basic was already providing care.
9. Demonstrate a simulated, organized, concise radio transmission.

### Contextual (When, Where, Why)

Communications occur from the pre-dispatch phase, throughout the call, and well after the completion of the transport. Various individuals will be involved in the verbal communication process and vital information will be discussed. The EMT-Basic must have excellent verbal and written communication skills to assure accurate information is delivered to the appropriate individuals. The continuum of patient care is based upon effective and efficient communication skills.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. The student should hear both sides of a radio transmission during the phases of a typical call:
    - To the scene.
    - At the scene.
    - To the facility.
    - At the facility.
    - To the station.
    - At the station.
2. The student should hear initiation and termination of a radio call.
3. The student should hear patient information delivered in the proper sequence.
4. The student should hear communication with a simulated patient.
5. The student should hear communication with the family of a simulated patient.
6. The student should hear communication with simulated bystanders.
7. The student should hear communication with individuals from other agencies at a call.
8. The student should hear a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT-Basic was already providing care.

### Visual (See)

1. The student should see examples of portable, mobile and base station radio equipment.
2. The student should see the communication skills used to interact with the family.
3. The student should see the communication skills used to interact with bystanders.
4. The student should see the communication skills used to interact with individuals from other agencies while providing patient care.
5. The student should see the components of the minimum data set.

### Kinesthetic (Do)

1. The student should practice radio use procedures in the following phases of a typical call:
    - To the scene.
    - At the scene.
    - To the facility.
    - At the facility.

   - To the station.
   - At the station.

2. The student should practice the proper methods of initiating and terminating a radio call.
3. The student should practice the proper sequence of delivery of patient information.
4. The student should practice the communication skills used to interact with the patient.
5. The student should practice the communication skills used to interact with the family.
6. The student should practice the communication skills used to interact with bystanders.
7. The student should practice the communication skills used to interact with individuals from other agencies while providing patient care.
8. The student should practice performing an organized, concise patient report that would be given to the medical staff at a receiving facility.
9. The student should practice performing a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT-Basic was already providing care.
10. The student should practice performing a simulated, organized, concise radio transmission.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 4

# Medical/Behavioral and Obstetrics/Gynecology

## Lesson 4-6

## Poisoning/ Overdose

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

4-6.1 List various ways that poisons enter the body.(C-1)
4-6.2 List signs/symptoms associated with poisoning.(C-1)
4-6.3 Discuss the emergency medical care for the patient with possible overdose.(C-1)
4-6.4 Describe the steps in the emergency medical care for the patient with suspected poisoning.(C-1)
4-6.5 Establish the relationship between the patient suffering from poisoning or overdose and airway management.(C-3)
4-6.6 State the generic and trade names, indications, contraindications, medication form, dose, administration, actions, side effects and re-assessment strategies for activated charcoal.(C-1)
4-6.7 Recognize the need for medical direction in caring for the patient with poisoning or overdose.(C-3)

### AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

4-6.8 Explain the rationale for administering activated charcoal.(A-3)
4-6.9 Explain the rationale for contacting medical direction early in the prehospital management of the poisoning or overdose patient.(A-3)

### PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

4-6.10 Demonstrate the steps in the emergency medical care for the patient with possible overdose.(P-1,2)

4-6.11 Demonstrate the steps in the emergency medical care for the patient with suspected poisoning.(P-1,2)
4-6.12 Perform the necessary steps required to provide a patient with activated charcoal.(P-2)
4-6.13 Demonstrate the assessment and documentation of patient response.(P-1,2)
4-6.14 Demonstrate proper disposal of the equipment for the administration of activated charcoal.(P-1,2)
4-6.15 Demonstrate completing a prehospital care report for patients with a poisoning/overdose emergency.(P-1,2)

## PREPARATION

| | |
|---|---|
| Motivation: | Thousands of children are poisoned every year as they explore their environments. Many adults also overdose on medication, either accidentally or deliberately. With early prehospital management, the vast majority of these patients have better outcomes. |
| Prerequisites: | BLS, Preparatory, Airway and Patient Assessment. |

### MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to poisoning/overdose emergencies. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure meeting the objectives of the curriculum. |
| EMS Equipment: | Activated charcoal, suction equipment. |

### PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in this area. |
| Assistant Instructor: | None required. |
| Recommended Minimum Time to Complete: | Two hours |

## PRESENTATION

### Declarative (What)

I. Emergency Medical Care of Poisoning/Overdose
  A. Important questions to consider asking patient
    1. What substance
    2. When did you ingest/become exposed
    3. If an ingestion, how much did you ingest
    4. Over what time period
    5. Interventions
    6. How much do you weigh
  B. Ingested
    1. Signs and symptoms
      a. History of ingestion
      b. Nausea
      c. Vomiting
      d. Diarrhea
      e. Altered mental status
      f. Abdominal pain
      g. Chemical burns around the mouth
      h. Different breath odors
    2. Emergency medical care
      a. Remove pills, tablets or fragments with gloves from patient's mouth, as needed, without injuring oneself.
      b. Consult medical direction - activated charcoal.
      c. Bring all containers, bottles, labels, etc. of poison agents to receiving facility.
  C. Inhaled
    1. Signs and symptoms
      a. History of inhalation of toxic substance
      b. Difficulty breathing
      c. Chest pain
      d. Cough
      e. Hoarseness
      f. Dizziness
      g. Headache
      h. Confusion
      i. Seizures
      j. Altered mental status

2. Emergency medical care
   a. Have trained rescuers remove patient from poisonous environment.
   b. Give oxygen, if not already done in the initial assessment.
   c. Bring all containers, bottles, labels, etc. of poison agents to receiving facility.

D. Toxic injection
1. Signs and symptoms
   a. Weakness
   b. Dizziness
   c. Chills
   d. Fever
   e. Nausea
   f. Vomiting
2. Emergency medical care
   a. Airway and oxygen.
   b. Be alert for vomiting.
   c. Bring all containers, bottles, labels, etc. of poison agents to receiving facility.

E. Absorbed
1. Signs and symptoms
   a. History of exposure
   b. Liquid or powder on patient's skin
   c. Burns
   d. Itching
   e. Irritation
   f. Redness
2. Emergency medical care
   a. Skin - remove contaminated clothing while protecting oneself from contamination.
      (1) Powder - brush powder off patient, then continue as for other absorbed poisons.
      (2) Liquid - irrigate with clean water for at least 20 minutes (and continue en route to facility if possible).
   b. Eye - irrigate with clean water away from affected eye for at least 20 minutes and continue en route to facility if possible.

II. Relationship to Airway Management
A. Use information and skills learned in airway section of course to manage airway difficulties.

- B. A patient's condition may deteriorate, so continue to assess patient for airway difficulties and manage as learned previously.

III. Medications
- A. Activated charcoal
  - 1. Medication name
    - a. Generic - Activated charcoal
    - b. Trade
      - (1) SuperChar™
      - (2) InstaChar™
      - (3) Actidose™
      - (4) LiquiChar™
      - (5) Others
  - 2. Indications - poisoning by mouth
  - 3. Contraindications
    - a. Altered mental status
    - b. Ingestion of acids or alkalis
    - c. Unable to swallow
  - 4. Medication form
    - a. Pre-mixed in water, frequently available in plastic bottle containing 12.5 grams activated charcoal.
    - b. Powder - should be avoided in field.
  - 5. Dosage
    - a. Adults and children: 1 gram activated charcoal/kg of body weight.
    - b. Usual adult dose: 25 - 50 grams
    - c. Usual infant/child dose: 12.5 - 25 grams
  - 6. Administration
    - a. Obtain order from medical direction either on-line or off-line.
    - b. Container must be shaken thoroughly.
    - c. Since medication looks like mud, patient may need to be persuaded to drink it.
    - d. A covered container and a straw may improve patient compliance since the patient cannot see the medication this way.
    - e. If patient takes a long time to drink the medication, the charcoal will settle and will need to be shaken or stirred again.
    - f. Record activity and time.
  - 7. Actions

    a. Binds to certain poisons and prevents them from being absorbed into the body.
    b. Not all brands of activated charcoal are the same; some bind much more poison than others, so consult medical direction about the brand to use.

8. Side effects
    a. Black stools
    b. Some patients, particularly those who have ingested poisons that cause nausea, may vomit.
    c. If the patient vomits, the dose should be repeated once.
9. Re-assessment strategies - the EMT-Basic should be prepared for the patient to vomit or further deteriorate.

## APPLICATION

### Procedural (How)

1. Show the student examples of poisoning by ingestion.
2. Show the student examples of poisoning by inhalation.
3. Show the student examples of poisoning by injection.
4. Show the student examples of poisoning by absorption.
5. Show the student activated charcoal.
6. Show the student how to administer activated charcoal.
7. Show the student how to care for a patient with suspected poisoning or overdose.

### Contextual (When, Where, Why)

The EMT-Basic can prevent injury and illness from ingested poisoning by administering activated charcoal. The sooner this happens, the more effect it will have. The EMT-Basic can also prevent loss of life by ensuring the patient who has overdosed has his airway protected.

## STUDENT ACTIVITIES

### Auditory (Hear)

None identified for this lesson.

### Visual (See)

1. The student should see audio-visuals aids or materials of examples of poisoning by ingestion.

2. The student should see audio-visuals aids or materials of examples of poisoning by inhalation.
3. The student should see audio-visuals aids or materials of examples of poisoning by injection.
4. The student should see audio-visuals aids or materials of examples of poisoning by absorption.
5. The student should see activated charcoal.
6. The student should see a demonstration of how to administer activated charcoal.
7. The student should see a demonstration of how to care for a patient with suspected poisoning or overdose.

Kinesthetic (Do)

1. The student should practice caring for a patient with suspected poisoning or overdose.
2. The student should practice the assessment and documentation of patient response to activated charcoal.
3. The student should practice completing a prehospital care report for patients with poisoning/overdose emergencies.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan. If there are local resources, for example, Poison Control Centers, utilize them.

# MODULE 5

# Trauma

## Lesson 5-1

## Bleeding and Shock

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-1.1 List the structure and function of the circulatory system.(C-1)
5-1.2 Differentiate between arterial, venous and capillary bleeding.(C-3)
5-1.3 State methods of emergency medical care of external bleeding.(C-1)
5-1.4 Establish the relationship between body substance isolation and bleeding.(C-3)
5-1.5 Establish the relationship between airway management and the trauma patient.(C-3)
5-1.6 Establish the relationship between mechanism of injury and internal bleeding.(C-3)
5-1.7 List the signs of internal bleeding.(C-1)
5-1.8 List the steps in the emergency medical care of the patient with signs and symptoms of internal bleeding.(C-1)
5-1.9 List signs and symptoms of shock (hypoperfusion).(C-1)
5-1.10 State the steps in the emergency medical care of the patient with signs and symptoms of shock (hypoperfusion).(C-1)

### AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-1.11 Explain the sense of urgency to transport patients that are bleeding and show signs of shock (hypoperfusion).(A-1)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-1.12 Demonstrate direct pressure as a method of emergency medical care of external bleeding. (P-1,2)

5-1.13 Demonstrate the use of diffuse pressure as a method of emergency medical care of external bleeding.(P-1,2)

5-1.14 Demonstrate the use of pressure points and tourniquets as a method of emergency medical care of external bleeding.(P-1,2)

5-1.15 Demonstrate the care of the patient exhibiting signs and symptoms of internal bleeding.(P-1,2)

5-1.16 Demonstrate the care of the patient exhibiting signs and symptoms of shock (hypoperfusion).(P-1,2)

5-1.17 Demonstrate completing a prehospital care report for patient with bleeding and/or shock (hypoperfusion).(P-2)

## PREPARATION

| | |
|---|---|
| Motivation: | Trauma is the leading cause of death in the United States for persons between the ages of 1 and 44. Understanding the mechanism of injury and relevant signs and symptoms of bleeding and shock (hypoperfusion) is of paramount importance when dealing with the traumatized patient. |
| Prerequisites: | BLS, Preparatory, Airway and Patient Assessment. |

### MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to bleeding and shock (hypoperfusion). The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure meeting the objectives of the curriculum. |
| EMS Equipment: | Sterile dressings, bandages, splints, pneumatic antishock garment, triangular bandage, stick or rod, air splints, gloves, eye protection, blanket. |

## PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in bleeding and shock (hypoperfusion). |
| Assistant Instructor: | The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in bleeding and shock. |
| Recommended Minimum Time to Complete: | Two hours |

## PRESENTATION

### Declarative (What)

I. Circulatory (Cardiovascular) System Review
   A. Anatomy review
      1. Heart
      2. Arteries
      3. Capillaries
      4. Veins
      5. Blood
      6. Physiology
      7. Perfusion
         a. Definition - circulation of blood through an organ structure.
         b. Perfusion delivers oxygen and other nutrients to the cells of all organ systems and the removes waste products.
         c. Hypoperfusion is the inadequate circulation of blood through an organ.

II. External Bleeding
   A. Body substance isolation must be routinely taken to avoid skin and mucous membrane exposure to body fluids.
      1. Eye protection
      2. Gloves
      3. Gown
      4. Mask
      5. Hand washing following each run.

B. Severity
   1. The sudden loss of one liter (1000cc) of blood in the adult patient, 1/2 liter (500cc) of blood in the child, and 100 - 200cc of the blood volume in an infant is considered serious. (For example, a one year old only has 800cc of blood, therefore 150cc is a major blood loss).
   2. The severity of blood loss must be based on the patient's signs and symptoms and the general impression of the amount of blood loss. If the patient exhibits signs and symptoms of shock (hypoperfusion), the bleeding is to be considered serious.
   3. The natural response to bleeding is blood vessel contractions and clotting; however, a serious injury may prevent effective clotting from occurring.
   4. Uncontrolled bleeding or significant blood loss leads to shock (hypoperfusion) and possibly death.

C. Types of bleeding
   1. Arterial
      a. The blood spurts from the wound.
      b. Bright, red, oxygen rich blood.
      c. Arterial bleeding is the most difficult to control because of the pressure at which arteries bleed.
      d. As the patient's blood pressure drops, the amount of spurting may also drop.
   2. Venous
      a. The blood flows as a steady stream.
      b. Dark, oxygen poor blood.
      c. Bleeding from a vein can be profuse; however, in most cases it is easier to control due to the lower venous pressure.
   3. Capillary
      a. The blood oozes from a capillary and is dark red in color.
      b. The bleeding often clots spontaneously.

D. Emergency medical care of external bleeding
   1. Body substance isolation
   2. Maintain airway/artificial ventilation.
   3. Bleeding control
      a. Apply finger tip pressure directly on the point of bleeding.
      b. Elevation of a bleeding extremity may be used secondary to and in conjunction with direct pressure.

    c. Large gaping wounds may require packing with sterile gauze and direct hand pressure if direct finger tip pressure fails to control bleeding.
    d. If bleeding does not stop, remove dressing and assess for bleeding point to apply direct pressure. If diffuse bleeding is discovered, apply additional pressure.
    e. Pressure points may be used in upper and lower extremities.

4. Methods to control external bleeding if direct pressure fails
    a. Splints
        (1) Reduction of motion of bone ends will reduce the amount and aggravation of tissue damage and bleeding associated with a fracture.
        (2) Splinting may allow prompt control of bleeding associated with a fracture.
    b. Pressure Splints
        (1) The use of air pressure splints can help control severe bleeding associated with lacerations of soft tissue or when bleeding is associated with fractures.
        (2) Pneumatic counterpressure devices (pneumatic antishock garment) can be used as an effective pressure splint to help control severe bleeding due to massive soft tissue injury to the lower extremities (leg compartments only) or traumatic pelvic hemorrhage (all compartments).
    c. Tourniquet
        (1) Use as a last resort to control bleeding of an amputated extremity when all other methods of bleeding control have failed.
        (2) Application of a tourniquet can cause permanent damage to nerves, muscles and blood vessels resulting in the loss of an extremity.
        (3) Procedures for applying a tourniquet:
            (a) Use a bandage 4 inches wide and 6 to 8 layers deep.
            (b) Wrap it around the extremity twice at a point proximal to the bleeding but as distal on the extremity as possible.

(c) Tie one knot in the bandage and place a stick or rod on top of the knot and tie the ends of the bandage over the stick in a square knot.

(d) Twist the stick until the bleeding stops.

(e) Once the bleeding has stopped, secure the stick or rod in position.

(f) Notify other emergency personnel who may care for the patient that a tourniquet has been applied.

(g) Document the use of a tourniquet and the time applied in the prehospital patient report.

(4) A continuously inflated blood pressure cuff may be used as a tourniquet until bleeding stops.

(5) Precautions with the use of a tourniquet:

(a) Use a wide bandage and secure tightly.

(b) Never use wire, rope, a belt, or any other material that may cut into the skin and underlying tissue.

(c) Do not remove or loosen the tourniquet once it is applied unless directed to do so by medical direction.

(d) Leave the tourniquet in open view.

(e) Do not apply a tourniquet directly over any joint, but as close to the injury as possible.

E. Special areas (bleeding from the nose, ears or mouth)

1. Potential causes:

a. Injured skull

b. Facial trauma

c. Digital trauma (nose picking)

d. Sinusitis and other upper respiratory tract infections

e. Hypertension (high blood pressure)

f. Coagulation disorders

2. Bleeding from the ears or nose may occur because of a skull fracture. If the bleeding is the result of trauma, do not attempt to stop the blood flow. Collect the blood with a loose dressing, which may also limit exposure to sources of infection.

3. Emergency medical care for epistaxis (nosebleed):

a. Place the patient in a sitting position leaning forward.

b. Apply direct pressure by pinching the fleshy portion of the nostrils together.

        c. Keep the patient calm and quiet.

III. Internal Bleeding
  A. Severity
    1. Internal bleeding can result in severe blood loss with resultant shock (hypoperfusion) and subsequent death.
    2. Injured or damaged internal organs commonly lead to extensive bleeding that is concealed.
    3. Painful, swollen, deformed extremities may also lead to serious internal blood loss.
    4. Suspicion and severity of internal bleeding should be based on the mechanism of injury and clinical signs and symptoms.
  B. Relationship to mechanism of injury
    1. Blunt trauma
      a. Falls
      b. Motorcycle crashes
      c. Pedestrian impacts
      d. Automobile collisions
      e. Blast injuries
      f. Look for evidence of contusions, abrasions, deformity, impact marks, and swelling.
    2. Penetrating trauma
  C. Signs and symptoms of internal bleeding
    1. Pain, tenderness, swelling or discoloration of suspected site of injury.
    2. Bleeding from the mouth, rectum, or vagina, or other orifice.
    3. Vomiting bright red blood or dark coffee ground colored blood.
    4. Dark, tarry stools or stools with bright red blood
    5. Tender, rigid, and/or distended abdomen
    6. Late signs and symptoms of hypovolemic shock (hypoperfusion)
      a. Anxiety, restlessness, combativeness or altered mental status
      b. Weakness, faintness or dizziness
      c. Thirst
      d. Shallow rapid breathing
      e. Rapid weak pulse
      f. Pale, cool, clammy skin
      g. Capillary refill greater than 2 seconds - infant and child patients only
      h. Dropping blood pressure (late sign)
      i. Dilated pupils that are sluggish to respond
      j. Nausea and vomiting

- D. Emergency medical care
    - 1. Body substance isolation
    - 2. Maintain airway/artificial ventilation.
    - 3. Administer oxygen if not already done during the initial assessment.
    - 4. If bleeding is suspected in an extremity, control bleeding by direct pressure and application of a splint.
    - 5. Immediate transport is critical for patient with signs and symptoms of shock (hypoperfusion).

IV. Shock (hypoperfusion syndrome)

- A. Severity
    - 1. Shock (hypoperfusion) results in inadequate perfusion of cells with oxygen and nutrients and inadequate removal of metabolic waste products.
    - 2. Cell and organ malfunction and death can result from shock (hypoperfusion); therefore, prompt recognition and treatment is vital to patient survival.
    - 3. Peripheral perfusion is drastically reduced due to the reduction in circulating blood volume.
    - 4. Trauma patients develop shock (hypoperfusion) from the loss of blood from both internal and external sites. This type of shock (hypoperfusion) is referred to as hypovolemic or hemorrhagic shock.
- B. Signs and symptoms of shock (hypoperfusion)
    - 1. Mental states
        - a. Restlessness
        - b. Anxiety
        - c. Altered mental status
    - 2. Peripheral perfusion
        - a. Delayed capillary refill greater than 2 seconds in normal ambient air temperature - infant and child patients only
        - b. Weak, thready or absent peripheral pulses
        - c. Pale, cool, clammy skin
    - 3. Vital signs
        - a. Decreased blood pressure (late sign)
        - b. Increased pulse rate (early sign) - weak and thready
        - c. Increased breathing rate
            - (1) Shallow
            - (2) Labored
            - (3) Irregular

4. Other signs and symptoms
    - a. Dilated pupils
    - b. Marked thirst
    - c. Nausea and vomiting
    - d. Pallor with cyanosis to the lips
5. Infant and child patients can maintain their blood pressure until their blood volume is more than half gone, so by the time their blood pressure drops they are close to death. The infant or child in shock has less reserve.

C. Emergency medical care

1. Body substance isolation.
2. Maintain airway/artificial ventilation. Administer oxygen if indicated.
3. Control any external bleeding.
4. If signs of shock (hypoperfusion) are present and the lower abdomen is tender and pelvic injury is suspected, with no evidence of chest injury, apply and inflate the pneumatic antishock garment if approved by medical direction.
5. Elevate the lower extremities approximately 8 to 12 inches. If the patient has serious injuries to the pelvis, lower extremities, head, chest, abdomen, neck, or spine, keep the patient supine.
6. Splint any suspected bone or joint injuries.
7. Prevent loss of body heat by covering the patient with a blanket when appropriate.
8. Immediate transport.

## APPLICATION

### Procedural (How)

1. Review the methods of controlling external bleeding with emphasis on body substance isolation.
2. Review the methods used to treat internal bleeding.
3. Review the methods used to treat the patient in shock (hypoperfusion).

Contextual (When, Where, Why)

Bleeding and shock (hypoperfusion) are identified during the initial patient assessment after securing the scene and ensuring personal safety. Control of arterial or venous bleeding will be done upon immediate identification, after airway and breathing. Treatment of shock (hypoperfusion) and internal bleeding will be performed immediately following the initial assessment and prior to the transportation of the patient. Bleeding that is uncontrolled or excessive will lead to shock (hypoperfusion). Shock (hypoperfusion) will lead to inadequate tissue perfusion and eventual cell and organ death.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. The students should hear simulated situations to identify signs and symptoms of external bleeding, internal bleeding, and shock (hypoperfusion).
2. The students should hear normal systolic and diastolic sounds associated with taking a blood pressure.

### Visual (See)

1. The students should see audio-visual aids or materials of the various types of external bleeding and various signs of internal bleeding and shock (hypoperfusion).
2. The student should see audio-visual aids or materials of the proper methods to control bleeding, and treat for internal bleeding and shock (hypoperfusion).
3. The student should see a patient to identify major bleeding and signs of internal bleeding and shock (hypoperfusion).
4. The students should see, in simulated situations, the application of direct pressure, elevation, splints, counterpressure devices, cryotherapy, and tourniquets in the treatment of external bleeding.
5. The students should see, in simulated situations, the treatment of the internal bleeding and shock (hypoperfusion).
6. The students should see audio-visual aids or materials with known amounts of blood on gauze pads, vaginal pads, clothing, floors, and humans.

### Kinesthetic (Do)

1. The students should practice application of direct pressure, elevation, splints, and tourniquets.
2. The students should practice the treatment of internal bleeding and shock (hypoperfusion).
3. The students should practice completing a prehospital care report for patients with bleeding and/or shock (hypoperfusion).

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 5

## Trauma

## Lesson 5-3

## Musculoskeletal Care

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-3.1 Describe the function of the muscular system.(C-1)
5-3.2 Describe the function of the skeletal system.(C-1)
5-3.3 List the major bones or bone groupings of the spinal column; the thorax; the upper extremities; the lower extremities.(C-1)
5-3.4 Differentiate between an open and a closed painful, swollen, deformed extremity.(C-1)
5-3.5 State the reasons for splinting.(C-1)
5-3.6 List the general rules of splinting.(C-1)
5-3.7 List the complications of splinting.(C-1)
5-3.8 List the emergency medical care for a patient with a painful, swollen, deformed extremity. (C-1)

### AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-3.9 Explain the rationale for splinting at the scene versus load and go.(A-3)
5-3.10 Explain the rationale for immobilization of the painful, swollen, deformed extremity.(A-3)

### PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-3.11 Demonstrate the emergency medical care of a patient with a painful, swollen, deformed extremity.(P-1,2)
5-3.12 Demonstrate completing a prehospital care report for patients with musculoskeletal injuries.(P-2)

## PREPARATION

| | |
|---|---|
| Motivation: | Musculoskeletal injuries are one of the most common types of injuries encountered by the EMT-Basic. These injuries are largely non-life threatening in nature; however, some may be life threatening. Prompt identification and treatment of musculoskeletal injuries is crucial in reducing pain, preventing further injury and minimizing permanent damage. |
| Prerequisites: | BLS, Preparatory, Airway and Patient Assessment. |

### MATERIALS

| | |
|---|---|
| AV Equipment: | Utilize various audio-visual materials relating to musculoskeletal care. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure meeting the objectives of the curriculum. |
| EMS Equipment: | Splints: Padded arm and leg, air, traction, cardboard, ladder, blanket, pillow, pneumatic antishock garment, improvised splinting material, e.g., magazines, etc. |

### PERSONNEL

| | |
|---|---|
| Primary Instructor: | One EMT-Basic instructor knowledgeable in musculoskeletal injuries and splinting techniques. |
| Assistant Instructor: | The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in musculoskeletal care and splinting techniques. |
| Recommended Minimum Time to Complete: | Four hours |

## PRESENTATION

### Declarative (What)

- I. Musculoskeletal Review
  - A. Anatomy review
  - B. The skeletal system
- II. Injuries to bones
  - A. Mechanism of injury
    - 1. Direct force
    - 2. Indirect force
    - 3. Twisting force
  - B. Bone or joint injuries
    - 1. Types
      - a. Open - break in the continuity of the skin
      - b. Closed - no break in the continuity of the skin
    - 2. Signs and symptoms
      - a. Deformity or angulation
      - b. Pain and tenderness
      - c. Grating
      - d. Swelling
      - e. Bruising (discoloration)
      - i. Exposed bone ends
      - j. Joint locked into position
    - 3. Emergency medical care of bone or joint injuries
      - a. Body substance isolation
      - b. Administer oxygen if not already done and indicated.
      - c. After life threats have been controlled, splint injuries in preparation for transport.
      - d. Application of cold pack to area of painful, swollen, deformed extremity to reduce swelling.
      - e. Elevate the extremity.
- III. Splinting
  - A. Reasons
    - 1. Prevent motion of bone fragments, bone ends or angulated joints.
    - 2. Minimize the following complications:
      - a. Damage to muscles, nerves, or blood vessels caused by broken bones.

        b. Conversion of a closed painful, swollen, deformed extremity to an open painful, swollen, deformed extremity.
        c. Restriction of blood flow as a result of bone ends compressing blood vessels.
        d. Excessive bleeding due to tissue damage caused by bone ends.
        e. Increased pain associated with movement of bone ends.
        f. Paralysis of extremities due to a damaged spine.

B. General rules of splinting
    1. Assess pulse, motor, and sensation distal to the injury prior to and following splint application and record findings.
    2. Immobilize the joint above and below the injury.
    3. Remove or cut away clothing.
    4. Cover open wounds with a sterile dressing.
    5. If there is a severe deformity or the distal extremity is cyanotic or lacks pulses, align with gentle traction before splinting.
    6. Do not intentionally replace the protruding bones.
    7. Pad each splint to prevent pressure and discomfort to the patient.
    8. Splint the patient before moving when feasible and no life threats.
    9. When in doubt, splint the injury when feasible and no life threats.
    10. If patient has signs of shock (hypoperfusion), align in normal anatomical position and transport (Total body immobilization. Example: Backboard takes care of all immobilization on emergency basis).

C. Equipment
    1. Rigid splints
    2. Traction splints
    3. Pneumatic splints (air, vacuum)
    4. Improvised splints, pillow
    5. Pneumatic Anti Shock Garment (as a splint)

D. Hazards of improper splinting
    1. Compression of nerves, tissues and blood vessels from the splint
    2. Delay in transport of a patient with life threatening injury
    3. Splint applied too tight on the extremity reducing distal circulation

4. Aggravation of the bone or joint injury
5. Cause or aggravate tissue, nerve, vessel or muscle damage from excessive bone or joint movement

E. Special considerations of splinting
  1. Long bone splinting procedure
    a. Body substance isolation
    b. Apply manual stabilization.
    c. Assess pulse, motor and sensory function.
    d. If there is a severe deformity or the distal extremity is cyanotic or lacks pulses, align with gentle traction before splinting.
    e. Measure splint.
    f. Apply splint immobilizing the bone and joint above and below the injury.
    g. Secure entire injured extremity.
    h. Immobilize hand/foot in position of function.
    i. Reassess pulse, motor, and sensation after application of splint and record.
  2. Splinting a joint injury
    a. Body substance isolation
    b. Apply manual stabilization.
    c. Assess pulse, motor and sensory function.
    d. Align with gentle traction if distal extremity is cyanotic or lacks pulses and no resistance is met.
    e. Immobilize the site of injury.
    f. Immobilize bone above and below the site of injury.
    g. Reassess pulse, motor and sensation after application of splint and record.
  3. Traction splinting
    a. Indications for use is a painful, swollen, deformed mid-thigh with no joint or lower leg injury.
    b. Contraindications of the use of a traction splint
      (1) Injury is close to the knee
      (2) Injury to the knee exists
      (3) Injury to the hip
      (4) Injured pelvis
      (5) Partial amputation or avulsion with bone separation, distal limb is connected only by marginal tissue. Traction would risk separation.
      (6) Lower leg or ankle injury.

c. Traction splinting procedure
    (1) Assess pulse, motor, and sensation distal to the injury and record.
    (2) Body substance isolation
    (3) Perform manual stabilization of the injured leg.
    (4) Apply manual traction - required when using a bi-polar traction splint.
    (5) Prepare/adjust splint to proper length.
    (6) Position splint under injured leg.
    (7) Apply proximal securing device (ischial strap).
    (8) Apply distal securing device (ankle hitch).
    (9) Apply mechanical traction.
    (10) Position/secure support straps.
    (11) Re-evaluate proximal/distal securing devices.
    (12) Reassess pulses, motor, sensation distal to the injury after application of the splint and record.
    (13) Secure torso to the longboard to immobilize hip.
    (14) Secure splint to the long board to prevent movement of splint.

## APPLICATION

### Procedural (How)

1. Show diagrams of the muscular system.
2. Show diagrams of the skeletal system.
3. Show audio-visual aids or materials of signs of open and closed type bone and joint injuries.
4. Demonstrate assessment of an injured extremity.
5. Demonstrate splinting procedures relevant to the general rules of splinting using: Rigid splints, traction splints, pneumatic splints, improvised splints, and pneumatic antishock garments.
6. Demonstrate procedure for splinting an injury with distal cyanosis or lacking a distal pulse.

### Contextual (When, Where, Why)

Injuries to bones and joints require splinting prior to the movement of the patient unless life-threatening injuries are present. If life-threatening injuries are present, splinting should be done en route to the receiving facility when possible.

Failure to splint or improperly splinting a bone or joint injury can result in damage to soft tissue, organs, nerves, muscles; increased bleeding associated with the injury; permanent damage or disability; conversion of a closed injury to an open injury; and an increase in pain.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. The student should hear simulations on various situations involving musculoskeletal injuries and the proper assessment and treatment.

### Visual (See)

1. The student should see diagrams of the muscular system.
2. The student should see diagrams of the skeletal system.
3. The student should see audio-visual aids or materials of signs of open and closed bone and joint injuries.
4. The student should see a demonstration of an assessment of an injured extremity.
5. The student should see a demonstration of splinting procedures relevant to the general rules of splinting using: Rigid splints, traction splints, pneumatic splints, improvised splints, and pneumatic antishock garments.
6. The student should see a demonstration of the procedure for splinting an injury with distal cyanosis or lacking a distal pulse.

### Kinesthetic (Do)

1. The student should practice assessment of an injured extremity.
2. The student should practice splinting procedures relevant to the general rules of splinting using: Rigid splints, traction splints, pneumatic splints, improvised splints, and pneumatic antishock garments.
3. The student should practice procedure for splinting an injury with distal cyanosis or lacking a distal pulse.
4. The student should practice completing a prehospital care report for patients with musculoskeletal injuries.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

Written: Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical: Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# MODULE 5

## Trauma

## Lesson 5-4

## Injuries to the Head and Spine

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-4.1 State the components of the nervous system.(C-1)
5-4.2 List the functions of the central nervous system.(C-1)
5-4.3 Define the structure of the skeletal system as it relates to the nervous system.(C-1)
5-4.4 Relate mechanism of injury to potential injuries of the head and spine.(C-3)
5-4.5 Describe the implications of not properly caring for potential spine injuries.(C-1)
5-4.6 State the signs and symptoms of a potential spine injury.(C-1)
5-4.7 Describe the method of determining if a responsive patient may have a spine injury.(C-1)
5-4.8 Relate the airway emergency medical care techniques to the patient with a suspected spine injury.(C-3)
5-4.9 Describe how to stabilize the cervical spine.(C-1)
5-4.10 Discuss indications for sizing and using a cervical spine immobilization device.(C-1)
5-4.11 Establish the relationship between airway management and the patient with head and spine injuries.(C-1)
5-4.12 Describe a method for sizing a cervical spine immobilization device.(C-1)
5-4.13 Describe how to log roll a patient with a suspected spine injury.(C-1)
5-4.14 Describe how to secure a patient to a long spine board.(C-1)
5-4.15 List instances when a short spine board should be used.(C-1)
5-4.16 Describe how to immobilize a patient using a short spine board.(C-1)
5-4.17 Describe the indications for the use of rapid extrication.(C-1)

5-4.18 List steps in performing rapid extrication.(C-1)
5-4.19 State the circumstances when a helmet should be left on the patient.(C-1)
5-4.20 Discuss the circumstances when a helmet should be removed.(C-1)
5-4.21 Identify different types of helmets.(C-1)
5-4.22 Describe the unique characteristics of sports helmets.(C-1)
5-4.23 Explain the preferred methods to remove a helmet.(C-1)
5-4.24 Discuss alternative methods for removal of a helmet.(C-1)
5-4.25 Describe how the patient's head is stabilized to remove the helmet.(C-1)
5-4.26 Differentiate how the head is stabilized with a helmet compared to without a helmet.(C-3)

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-4.27 Explain the rationale for immobilization of the entire spine when a cervical spine injury is suspected.(A-3)
5-4.28 Explain the rationale for utilizing immobilization methods apart from the straps on the cots.(A-3)
5-4.29 Explain the rationale for utilizing a short spine immobilization device when moving a patient from the sitting to the supine position.(A-3)
5-4.30 Explain the rationale for utilizing rapid extrication approaches only when they indeed will make the difference between life and death.(A-3)
5-4.31 Defend the reasons for leaving a helmet in place for transport of a patient.(A-3)
5-4.32 Defend the reasons for removal of a helmet prior to transport of a patient.(A-3)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

5-4.33 Demonstrate opening the airway in a patient with suspected spinal cord injury.(P-1,2)
5-4.34 Demonstrate evaluating a responsive patient with a suspected spinal cord injury.(P-1,2)
5-4.35 Demonstrate stabilization of the cervical spine.(P-1,2)
5-4.36 Demonstrate the four person log roll for a patient with a suspected spinal cord injury.(P-1,2)
5-4.37 Demonstrate how to log roll a patient with a suspected spinal cord injury using two people.(P-1,2)
5-4.38 Demonstrate securing a patient to a long spine board.(P-1,2)

5-4.39 Demonstrate using the short board immobilization technique.(P-1,2)
5-4.40 Demonstrate procedure for rapid extrication.(P-1,2)
5-4.41 Demonstrate preferred methods for stabilization of a helmet. (P-1,2)
5-4.42 Demonstrate helmet removal techniques.(P-1,2)
5-4.43 Demonstrate alternative methods for stabilization of a helmet.(P-1,2)
5-4.44 Demonstrate completing a prehospital care report for patients with head and spinal injuries.(P-2)

## PREPARATION

Motivation: Injuries to the head and spine are extremely serious and may result in severe permanent disability or death if improperly treated or missed in the assessment.

Prerequisites: BLS, Preparatory, Airway and Patient Assessment.

### MATERIALS

AV Equipment: Utilize various audio-visual materials relating to injuries of the head and spine. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure meeting the objectives of the curriculum.

EMS Equipment: Long spine board, short spine immobilization device, cervical immobilization devices, helmet, head immobilization device, blanket roll, two inch tape.

### PERSONNEL

Primary Instructor: One EMT-Basic instructor knowledgeable in head and spinal injuries.

Assistant Instructor: The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in head and spinal emergencies and treatment.

Recommended Minimum Time to Complete: Four hours

## PRESENTATION

Declarative (What)

- I. The Nervous System Review
  - A. Components
  - B. Actions
- II. The Skeletal System
  - A. Functions
  - B. Components
    - 1. Skull
    - 2. Spinal column
      - a. 33 bones
      - b. Surrounds and protects the spinal cord.
- III. Injuries to the Spine
  - A. Mechanism of injury
    - 1. Compression
      - a. Falls
      - b. Diving accidents
      - c. Motor vehicle accidents
    - 2. Excessive flexion, extension, rotation
    - 3. Lateral bending
    - 4. Distraction
      - a. Pulling apart of the spine
      - b. Hangings
    - 5. Maintain a high index of suspicion
      - a. Motor vehicle crashes
      - b. Pedestrian - vehicle collisions
      - c. Falls
      - d. Blunt trauma
      - e. Penetrating trauma to head, neck, or torso
      - f. Motorcycle crashes
      - g. Hangings
      - h. Diving accidents
      - i. Unconscious trauma victims
  - B. Signs and symptoms
    - 1. Ability to walk, move extremities or feel sensation; or lack of pain to spinal column does not rule out the possibility of spinal column or cord damage.
    - 2. Tenderness in the area of injury

3. Pain associated with moving
    a. Do not ask the patient to move to try to elicit a pain response.
    b. Do not move the patient to test for a pain response.
4. Tell the patient not to move while asking questions.
5. Pain independent of movement or palpation
    a. Along spinal column
    b. Lower legs
    c. May be intermittent
6. Obvious deformity of the spine upon palpation
7. Soft tissue injuries associated with trauma
    a. Head and neck to cervical spine
    b. Shoulders, back or abdomen - thoracic, lumbar
    c. Lower extremities - lumbar, sacral
8. Numbness, weakness or tingling in the extremities
9. Loss of sensation or paralysis below the suspected level of injury
10. Loss of sensation or paralysis in the upper or lower extremities
11. Incontinence

C. Assessing the potential spine injured patient
1. Responsive patient
    a. Mechanism of injury
    b. Questions to ask
        (1) Does your neck or back hurt?
        (2) What happened?
        (3) Where does it hurt?
        (4) Can you move your hands and feet?
        (5) Can you feel me touching your fingers?
        (6) Can you feel me touching your toes?
    c. Inspect for contusions, deformities, lacerations, punctures, penetrations, swelling.
    d. Palpate for areas of tenderness or deformity.
    e. Assess equality of strength of extremities
        (1) Hand grip
        (2) Gently push feet against hands
2. Unresponsive patient
    a. Mechanism of injury
    b. Initial assessment
    c. Inspect for:
        (1) Contusions
        (2) Deformities

            (3) Lacerations
            (4) Punctures/penetrations
            (5) Swelling
        d. Palpate for areas of tenderness or deformity.
        e. Obtain information from others at the scene to determine information relevant to mechanism of injury or patient mental status prior to the EMT-Basic's arrival.

D. Complications
    1. Inadequate breathing effort
    2. Paralysis

E. Emergency medical care
    1. Body substance isolation
    2. Establish and maintain in-line immobilization.
        a. Place the head in a neutral in-line position unless the patient complains of pain or the head is not easily moved into position.
        b. Place head in alignment with spine.
        c. Maintain constant manual in-line immobilization until the patient is properly secured to a backboard with the head immobilized.
    3. Perform initial assessment.
        a. Whenever possible, airway control must be done with in-line immobilization.
        b. Whenever possible, artificial ventilation must be done with in-line immobilization.
    4. Assess pulse, motor and sensation in all extremities.
    5. Assess the cervical region and neck.
    6. Apply a rigid, cervical immobilization device.
        a. Properly size the cervical immobilization device. If it doesn't fit use a rolled towel and tape to the board and have rescuer hold the head manually.
        b. An improperly fit immobilization device will do more harm than good.
    7. If found in a lying position, immobilize the patient to a long spine board.
        a. Position the device.
        b. Move the patient onto the device by log rolling.
            (1) One EMT-Basic must maintain in-line immobilization of the head and spine.
            (2) EMT-Basic at the head directs the movement of the patient.

(3) One to three other EMT-Basics control the movement of the rest of the body.

(4) Quickly assess posterior body if not already done in focused history and physical exam.

(5) Position the long spine board under the patient.

(6) Place patient onto the board at the command of the EMT-Basic holding in-line immobilization using a slide, proper lift, log roll or scoop stretcher so as to limit movement to the minimum amount possible. Which method to use must be decided based upon the situation, scene and available resources.

(7) Pad voids between the patient and the board.
   (a) Adult
      i) Under the head
      ii) Voids under torso. Be careful of extra movement.
   (b) Infant and child - pad under the shoulders to the toes to establish a neutral position.

(8) Immobilize torso to the board.

(9) Immobilize the patient's head to the board.

(10) Secure the legs to the board.

(11) Reassess pulses, motor and sensation and record.

8. If the patient is found in a sitting position in a chair, immobilize with a short spine immobilization device. Exception: If the patient must be removed urgently because of his injuries, the need to gain access to others, or dangers at the scene, he must then be lowered directly onto a longboard and removed with manual immobilization provided.
   a. Position device behind the patient.
   b. Secure the device to the patient's torso.
   c. Evaluate torso fixation and adjust as necessary without excessive movement of the patient.
   d. Evaluate and pad behind the patient's head as necessary to maintain neutral in-line immobilization.
   e. Secure the patient's head to the device.
   f. Insert a longboard under the patient's buttocks and rotate and lower him to it. If not possible, lower him to the long spine board.
   g. Reassess pulses, motor and sensory in all extremities and record.

9. If the patient is found in a standing position, immobilize the patient to a long spine board.
    a. Position the device behind patient.
    b. Move the patient onto the device by:
        (1) One rescuer on each side of the patient, one additional rescuer at the foot facing the patient.
        (2) The rescuers on both sides of the patient reach with the hand closest to the patient under the arm to grasp the board, and use the hand farthest from the patient to secure the head.
        (3) Once the position is assured, they place the leg closest to the board behind the board and begin to tip the top backward. The rescuer at the foot of the board secures the board and the patient to prevent them from sliding, and the board is brought into a level horizontal position.
10. If the patient is critically injured, perform a rapid extrication.
11. Transport the patient immediately.
    a. Bring body into alignment.
    b. Transfer to long board without short spine board.

IV. Injuries to the Brain and Skull
  A. Head injuries
    1. Injuries to the scalp
        a. Very vascular, may bleed more than expected.
        b. Control bleeding with direct pressure.
    2. Injury to the brain - injury of brain tissue or bleeding into the skull will cause an increase of pressure in the skull.
  B. Related non-traumatic conditions
    1. Non-traumatic injuries to the brain may occur due to clots or hemorrhaging.
    2. Non-traumatic brain injuries can be a cause of altered mental status.
    3. Signs and symptoms parallel that of traumatic injuries with the exception of evidence of trauma and a lack of mechanism of injury.
  C. Skull injury - signs and symptoms
    1. Mechanism of trauma
    2. Contusions, lacerations, hematomas to the scalp
    3. Deformity to the skull
    4. Blood or fluid (cerebrospinal fluid) leakage from the ears or nose
    5. Bruising (discoloration) around the eyes

        6. Bruising (discoloration) behind the ears (mastoid process)
- D. Head injury
    - 1. Traumatic
    - 2. Signs and symptoms
        - a. Altered or decreasing mental status is the best indicator of a brain injury.
            - (1) Confusion, disorientation, or repetitive questioning
            - (2) Conscious - deteriorating mental status
            - (3) Unresponsive
        - b. Irregular breathing pattern
        - c. Consideration of mechanism of injury
            - (1) Deformity of windowshield
            - (2) Deformity of helmet
        - d. Contusions, lacerations, hematomas to the scalp
        - e. Deformity to the skull
        - f. Blood or fluid (cerebrospinal fluid) leakage from the ears and nose
        - g. Bruising (discoloration) around the eyes
        - h. Bruising (discoloration) behind the ears (mastoid process)
        - i. Neurologic disability
        - j. Nausea and/or vomiting
        - k. Unequal pupil size with altered mental status
        - l. Seizure activity may be seen.
- E. Open head injury
    - 1. Signs and symptoms
        - a. Consideration of mechanism of injury
            - (1) Deformity of windowshield
            - (2) Deformity of helmet
        - b. Contusions, lacerations, hematomas to the scalp
        - c. Deformity to the skull
        - d. Penetrating injury - do not remove impaled objects in the skull
        - e. Soft area or depression upon palpation
        - f. Exposed brain tissue if open
        - g. Bleeding from the open bone injury
        - h. Blood or fluid (cerebrospinal fluid) leakage from the ears and nose
        - i. Bruising (discoloration) around the eyes
        - j. Bruising (discoloration) behind the ears (mastoid process)
        - k. Nausea and/or vomiting

        - I. Possible signs and symptoms of a closed head injury may exist if brain injury has occurred.
    - F. Emergency medical care
        - 1. Body substance isolation
        - 2. Maintain airway/artificial ventilation/oxygenation.
        - 3. Initial assessment with spinal immobilization should be done on scene with a complete detailed physical exam en route.
        - 4. With any head injury, the EMT-Basic must suspect spinal injury. Immobilize the spine.
        - 5. Closely monitor the airway, breathing, pulse, and mental status for deterioration.
        - 6. Control bleeding.
            - a. Do not apply pressure to an open or depressed skull injury.
            - b. Dress and bandage open wound as indicated in the treatment of soft tissue injuries.
        - 7. If a medical injury or non-traumatic injury exist, place patient on the left side.
        - 8. Be prepared for changes in patient condition.
        - 9. Immediately transport the patient.
- V. Immobilization
    - A. Cervical spine immobilization devices
        - 1. Indications
            - a. Any suspected injury to the spine based on mechanism of injury, history or signs and symptoms.
            - b. Use in conjunction with short and long backboards.
        - 2. Sizing
            - a. Various types of rigid cervical immobilization devices exist, therefore, sizing is based on the specific design of the device.
            - b. An improperly sized immobilization device has a potential for further injury.
            - c. Do not obstruct the airway with the placement of a cervical immobilization device.
            - d. If it doesn't fit use a rolled towel and tape to the board and manually support the head. An improperly fit device will do more harm than good.
        - 3. Precautions
            - a. Cervical immobilization devices alone do not provide adequate in-line immobilization.

1260

      b. Manual immobilization must always be used with a cervical immobilization device until the head is secured to a board.
B. Short backboards
   1. Several different types of short board immobilization devices exist.
      a. Vest type devices
      b. Rigid short board
   2. Provides stabilization and immobilization to the head, neck and torso.
   3. Used to immobilize non-critical sitting patients with suspected spinal injuries.
   4. General application
      a. Start manual in-line immobilization.
      b. Assess pulses, motor and sensory function in all extremities.
      c. Assess the cervical area.
      d. Apply a cervical immobilization device.
      e. Position short board immobilization device behind the patient.
      f. Secure the device to the patient's torso.
      g. Evaluate torso and groin fixation and adjust as necessary without excessive movement of the patient.
      h. Evaluate and pad behind the patient's head as necessary to maintain neutral in-line immobilization.
      i. Secure the patient's head to the device.
      j. Release manual immobilization of head.
      k. Rotate or lift the patient to the long spine board.
      l. Immobilize patient to long spine board.
      m. Reassess pulses, motor and sensory function in all extremities.
C. Long backboards (Full body spinal immobilization devices)
   1. Several different types of long board immobilization devices exist.
   2. Provide stabilization and immobilization to the head, neck and torso, pelvis and extremities.
   3. Used to immobilize patients found in a lying, standing, or sitting position.
   4. Sometimes used in conjunction with short backboards.
   5. General application
      a. Start manual in-line immobilization.

- b. Assess pulses, motor and sensory function in all extremities.
- c. Assess the cervical area.
- d. Apply a cervical immobilization device.
- e. Position the device.
- f. Move the patient onto the device by log roll, suitable lift or slide, or scoop stretcher. A log roll is:
  - (1) One EMT-Basic must maintain in-line immobilization.
  - (2) EMT-Basic at the head directs the movement of the patient.
  - (3) One to three other EMT-Basics control the movement of the rest of the body.
  - (4) Quickly assess posterior body if not already done in initial assessment.
  - (5) Position the long spine board under the patient.
  - (6) Roll patient onto the board at the command of the EMT-Basic holding in-line immobilization.
- g. Pad voids between the patient and the board.
  - (1) Adult
    - (a) Under the head as needed
    - (b) Under the torso as needed
  - (2) Infant and child - pad under the shoulders to the toes to establish a neutral position.
- h. Immobilize torso to the board by applying straps across the chest and pelvis and adjust as needed.
- i. Immobilize the patient's head to the board.
- j. Fasten legs, proximal to and distal to the knees.
- k. Reassess pulses, motor and sensation and record.

VI. Special Considerations
- A. Rapid extrication
  - 1. Indications
    - a. Unsafe scene
    - b. Unstable patient condition warrants immediate movement and transport.
    - c. Patient blocks the EMT-Basic's access to another, more seriously injured, patient.
    - d. Rapid extrication is based on time and the patient, and not the EMT-Basic's preference.
  - 2. Procedure - refer to section on Lifting and Moving the Patient.

B. Helmet removal
  1. Special assessment needs for patients wearing helmets.
     a. Airway and breathing.
     b. Fit of the helmet and patient's movement within the helmet.
     c. Ability to gain access to airway and breathing.
  2. Indications for leaving the helmet in place
     a. Good fit with little or no movement of the patient's head within the helmet.
     b. No impending airway or breathing problems.
     c. Removal would cause further injury to the patient.
     d. Proper spinal immobilization could be performed with helmet in place.
     e. No interference with the EMT-Basic's ability to assess and reassess airway and breathing.
  3. Indications for removing the helmet
     a. Inability to assess and/or reassess airway and breathing.
     b. Restriction of adequate management of the airway or breathing.
     c. Improperly fitted helmet allowing for excessive patient head movement within the helmet.
     d. Proper spinal immobilization cannot be performed due to helmet.
     e. Cardiac arrest.
  4. Types of helmets:
     a. Sports
        (1) Typically open anteriorly
        (2) Easier access to airway
     b. Motorcycle
        (1) Full face
        (2) Shield
     c. Other
  5. General rules for removal of a helmet.
     a. The technique for removal of a helmet depends on the actual type of helmet worn by the patient.
     b. Take eyeglasses off before removal of the helmet.
     c. One EMT-Basic stabilizes the helmet by placing his hands on each side of the helmet with the fingers on the mandible to prevent movement.
     d. Second EMT-Basic loosens the strap.

        e. The second EMT-Basic places one hand on the mandible at the angle of the jaw and the other hand posteriorly at the occipital region.
        f. The EMT-Basic holding the helmet pulls the sides of the helmet apart and gently slips the helmet halfway off the patient's head then stops.
        g. The EMT-Basic maintaining stabilization of the neck repositions, slides the posterior hand superiorly to secure the head from falling back after complete helmet removal.
        h. The helmet is removed completely.
        i. The EMT-Basic then can proceed with spinal immobilization as indicated in the spinal immobilization section.

C. Infants and children - immobilize the infant or child on a rigid board appropriate for size (short, long or padded splint), according to the procedure outline in the spinal immobilization section. Special considerations:
    1. Pad from the shoulders to the heels of the infant or child, if necessary to maintain neutral immobilization.
    2. Properly size the cervical immobilization device. If it doesn't fit, use a rolled towel and tape to the board and manually support head. An improperly fit immobilization device will do more harm than good.

## APPLICATION

### Procedural (How)

1. Show diagrams or illustrations of the nervous system anatomy.
2. Show diagrams or illustrations of the structure of the skeletal system as it relates to the nervous system.
3. Show audio-visual aids or materials of related mechanism of injury to potential injuries of the head and spine.
4. Show audio-visual aids or materials of potential signs and symptoms of a potential spine injury.
5. Demonstrate the method of determining if a responsive patient may have a spine injury.

6. Demonstrate the airway emergency medical care techniques for the patient with a suspected spinal cord injury.
7. Demonstrate methods for sizing various cervical spine immobilization devices.
8. Demonstrate rapid extrication techniques.
9. Demonstrate how to stabilize the cervical spine.
10. Demonstrate how to immobilize a patient using a short spine board.
11. Demonstrate how to log roll a patient with a suspected spine injury.
12. Demonstrate how to secure a patient to a long spine board.
13. Demonstrate the preferred methods to remove sports, motorcycle and various other helmets.
14. Demonstrate alternative methods for removal of a helmet.
15. Demonstrate how the head is stabilized with a helmet compared to without a helmet.
16. Demonstrate how the patient's head is stabilized in order to remove a helmet.
17. Demonstrate sudden airway emergency medical care with helmet on.

### Contextual (When, Where, Why)

For every patient who is involved in any type of traumatic incident in which the mechanism of injury and/or signs and symptoms indicate a possible spinal injury, complete spinal immobilization must be conducted. Critically injured or ill patients may be rapidly moved only with spinal immobilization techniques utilized. A short backboard or spinal immobilization device will be used on non-critically injured patients at the scene prior to movement of the patient. However, when patients present with life threats, or the scene is unsafe for the EMT-Basic, the patient is moved by a rapid extrication technique. Failure to immobilize the spine or treat the head injured patient will lead to increased patient morbidity and mortality.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Simulations in which immobilization techniques are needed and performed.
2. Simulations in which patients present with head injuries.

### Visual (See)

1. The student should see audio-visual aids or materials of the nervous system anatomy.
2. The student should see audio-visual aids or materials of the structure of the skeletal system as it relates to the nervous system.
3. The student should see audio-visual aids or materials of mechanism of injury related to potential injuries of the head and spine.

4. The student should see audio-visual aids or materials of signs and symptoms of a potential spine injury.
5. The student should see a demonstration of the method of determining if a responsive patient may have a spine injury.
6. The student should see a demonstration of the airway emergency medical care techniques for the patient with a suspected spine injury.
7. The student should see a demonstration of the methods for sizing various cervical spine immobilization devices.
8. The student should see a demonstration of rapid extrication techniques.
9. The student should see a demonstration of how to stabilize the cervical spine.
10. The student should see a demonstration of how to immobilize a patient using a short spine board.
11. The student should see a demonstration of how to log roll a patient with a suspected spinal injury.
12. The student should see a demonstration of how to secure a patient to a long spine board.
13. The student should see a demonstration of the preferred methods to remove sports, motorcycle and various other helmets.
14. The student should see a demonstration of alternative methods for removal of a helmet.
15. The student should see a demonstration of how the head is stabilized with a helmet compared to without a helmet.
16. The student should see a demonstration of how the patient's head is stabilized in order to remove a helmet.
17. The student should see various types of long backboards.
18. The student should see various types of vest type immobilization devices.
19. The student should see various types of short backboards.
20. The student should see various types of helmets.
21. The student should see a demonstration of immobilization of an infant or child patient on a long backboard.

### Kinesthetic (Do)

1. The student should practice opening the airway in a patient with suspected spinal cord injury.
2. The student should practice evaluating a responsive patient with a suspected spinal cord injury.
3. The student should practice stabilization of the cervical spine.
4. The student should practice using the short board immobilization technique.
5. The student should practice the four person log roll for a patient with a suspected spinal cord injury.

1266

6. The student should practice how to log roll a patient with a suspected spinal cord injury using two people.
7. The student should practice securing a patient to a long spine board.
8. The student should practice helmet removal techniques.
9. The student should practice the procedure for rapid extrication.
10. The student should practice the preferred methods for stabilization of the helmet.
11. The student should practice alternative methods for stabilization of the helmet.
12. The student should practice preferred methods for stabilization of the head.
13. The student should practice alternative methods for stabilization of the head.
14. The student should practice completing a prehospital care report for patients with head and spinal injuries.
15. The student should practice the use of cervical immobilization devices, rolls and short boards for immobilizing the infant or child patient.

### INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

# ACTIVITY MATERIALS

## LESSON 1

1.1 Icebreaker (no materials)

## LESSON 2

2.1 Instructor Roleplay scenarios (instructor only)

## LESSON 3

3.1 Negligence scenarios

## LESSON 4

4.1 The Apple Exercise (instructions, instructor only)

## LESSON 5

5.1 Room Setup scenarios

## LESSON 6

6.1 Use Your Objectives (no materials)

6.2 Teach a Simple Skill (no materials)

6.3 Affective Skills scenarios

## LESSON 7

7.1 Evaluation Instruments (no materials)

## LESSON 8

8.1 Decide on Your Methods (no materials)

8.2 Instructor Roleplay scenarios

8.3 Mini-Presentation activity description

## LESSON 9

9.1 Design Your Own Media (no materials)

## LESSON 10

10.1 Develop Your Lesson Plan (no materials)

## FINAL PRESENTATIONS

Refer to the Final Presentation section of your notebook.

## ACTIVITY 3.1—NEGLIGENCE SCENARIOS

**Scenario #1**

A student in your class contracts Hepatitis B. The student sues you, the instructor, for negligence based on the fact that another student in the class also had Hepatitis B and that their only form of contact was through using the same mannequin in your class. You always use disposable covers for the mannequin's mouth and always clean the mannequin before class. Your log book was not completed for that class.

Could you be considered negligent? If so, describe how each of the four elements of negligence is met. If not, describe how at least one has not been met.

**Scenario #2**

An EMT witnesses a woman having a heart attack at a local coffee shop, but does not offer to help. Later the woman learns that an EMT was present and decides to sue both the EMT and her instructor. Your notes for the lesson clearly state that an EMT who is not on duty is never required to give assistance.

Could you be considered negligent? If so, describe how each of the four elements of negligence is met. If not, describe how at least one has not been met.

# ACTIVITY 3.1—NEGLIGENCE SCENARIOS

### Scenario #3

An EMT, who was a former student of yours, fails to adequately isolate a patient with a new strain of virus, now airborne. The EMT and a bystander both contract the virus. The airborne nature of this new strain was just beginning to be described in medical journals when you delivered training to this EMT's class, but no changes had been made to the standard curriculum.

Could you be considered negligent? If so, describe how each of the four elements of negligence is met. If not, describe how at least one has not been met.

### Scenario #4

During a class you direct pairs of students to practice performing IVs. Your beeper goes off and you go to the pay phone to respond to an urgent message, leaving the students without direct supervision. During that time, an IV breaks off, causing a plastic embolus and resulting in a student's hospitalization.

Could you be considered negligent? If so, describe how each of the four elements of negligence is met. If not, describe how at least one has not been met.

## ACTIVITY 5.1—ROOM SETUP DESCRIPTION CARDS

1. A graduate seminar with 12 students: The Philosophic Underpinnings of the New Russian Republic

2. Certification for Electrician's Apprentice with a class size of 10

---

1. Business School class with 35 students: Microcomputer Use for the Administrative Assistant

2. A half-day session sponsored by the International Society of Arboriculture with 6 students enrolled: Safe Procedures in Electrical Accidents.

## ACTIVITY 5.1—ROOM SETUP DESCRIPTION CARDS

1. Undergraduate course with 60 students: Introduction to Mass Communication

2. Class of 18: Pig heart dissection

---

1. EMT-Paramedic Refresher Course with 8 students: Pre-Hospital Trauma Life Support (PHTLS)

2. Tutoring session for homebound student in Biology

## ACTIVITY 5.1 – ROOM SETUP DESCRIPTION CARDS

1. A graduate course in Environmental Sciences with 20 students: Biohazards of the Chesapeake Bay

2. Technical School for Network Techicians. Class Size: 40 students

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1. English as a Second Language class for eight volunteers

2. Medical School class with 26 students: Pharmacology

## ACTIVITY 6.3—SITUATIONS REQUIRING AFFECTIVE SKILLS

Parents have just been informed that their six-year-old son has died of poisoning. The father becomes belligerent and accuses you of failing to treat his son in time.

You've arrived on a call and all indications are that the patient is dying. Family members are present and one is hysterical.

You've answered a call from a woman who has been beaten and should be checked for internal injuries. No none else is present.

You're riding with the ambulance crew and the vehicle is involved in an accident. The driver of the other car begins screaming at you.

You are part of a volunteer rescue squad. During a weekly social get together the group has just been told that the money that you were all expecting for new equipment has been allocated to something else. One team member has threatened to quit.

A student has come to you to report the death of their mother.

## ACTIVITY 6.3—SITUATIONS REQUIRING AFFECTIVE SKILLS

You need to explain to an elderly patient that you have to take them to the hospital.

You've arrived at an accident and many bystanders have gathered around. Their presence is making the victim uncomfortable.

You are dealing with a child who has been cut badly and is scared. The mother is crying.

## Activity 8.2—Instructor Roleplay

**Objective:**

Given a scenario, students will participate in a roleplay activity. Students will simulate appropriate instructor responses, display proficiency in the use of feedback, and demonstrate the communication skills discussed in this lesson.

**Suggested Time:** 30 minutes

**Organization:** Paired roleplays conducted in front of the class

**Materials:** Scenario Cards

Please note that the activity materials include three types of scenario cards:

- Roleplay Scenario Cards (6)—these cards are given to the participant playing the student. The instructor responds appropriately, according to the objectives listed above.
- An additional card has been provided with four scenarios that require a classroom situation to roleplay. To enact a group roleplay, see the instructions below.
- A blank card for you to reproduce and fill in with additional scenarios

**Instructions:**

PAIRED ROLEPLAYS

1. Break into pairs. Hand out copies of the roleplay cards and have participants look at the scenario described.
2. Give participants 3 minutes to roleplay their scenario.
3. Debrief the activity by reviewing instructor roles and the use of feedback. Reinforce the principles of active listening and review confirming as opposed to disconfirming responses, using examples from the roleplay to illustrate.

## Activity 8.2—Active Listening Roleplay (cont'd)

### GROUP ROLEPLAY

If desired, set up and enact a group roleplay for additional practice in a classroom rather than a one-on-one, or counseling, situation.

1. Break the class into two groups

2. Have each group select an "instructor"

3. Assign a couple of specific roles, and ask the others to roleplay one of the "challenging" students discussed in Lesson 2, e.g., the Clown, the "Voice of Experience," etc.

4. Have each group roleplay a classroom interaction

5. Debrief, pointing out the differences between group and one-on-one encounters with students.

## ACTIVITY 8.2—INSTRUCTOR SKILLS ROLEPLAY

You are upset because another student has been harassing you and have asked for a meeting to discuss it.

A new EMT has volunteered in your unit, and you just don't like him. Things got nasty during your last shift and you're thinking of quitting. You've decided to talk it over with your instructor.

## ACTIVITY 8.2—INSTRUCTOR SKILLS ROLEPLAY

You've come to ask for an extension for completing your clinicals.

The school has lost your records and you want to enroll in a class.

## ACTIVITY 8.2—INSTRUCTOR SKILLS ROLEPLAY

Your car broke down on the way to class the day you were to do your Final Presentation.

Last night when you were on call, your team responded to a call in which the father of three children was killed in a head-on collision. You are upset and just want to talk about it.

## ACTIVITY 8.2—INSTRUCTOR SKILLS ROLEPLAY

During a class session, you express confusion about the procedure the instructor is explaining.

You're in a class on Patient Assessment and you're reluctant to do the secondary assessment.

You are an elderly person who has held advanced first aid cards for 30 years. You feel this is all you need to provide good patient care on the ambulance.

You are a paid provider and are being forced to attend this class with no salary incentive. You feel you already know the material or that it is not relevant in your position.

## ACTIVITY 8.3—MINI-PRESENTATION

In this exercise you will make a three-four minute presentation to practice the skills we have just discussed. You will tell about a personal experience, the best thing that ever happened to you, your biggest surprise, your most intense scare, your most embarrassing moment—anything that you feel strongly about. You can choose a work-related story, but it is not necessary.

Focus on using the communication skills we have discussed.

- Engaging opening
- Eye contact
- Open posture
- Appropriate gestures and movement
- Understandable and clear speaking voice
- Logically ordered presentation
- Stress key points
- Effective closing

You will have ten minutes to prepare your presentation. Use this basic structure.

### Introduction

Introduce the topic. Draw in the audience's interest. Ask a question, show a prop, throw out a teaser (something trainees will be waiting to hear the outcome of at the end of the story).

### Body

Tell your story.

### Conclusion

Close your presentation with a "punchline." The effect the event had, what you learned, or advice for your audience if they find themselves in a similar situation.

Give the presentation without note cards and do not stand behind the lectern or table. Becoming comfortable and working without these props will help you to develop an open, natural style.

# APPENDIX B

## REFERENCES

### LESSON 1

None

### LESSON 2

2-1 Pre-Course Checklist

### LESSON 3

3-1 National Registry
  Purpose of Establishment
  EMT-Paramedics Job Analysis
  Examination Accommodations—Disability Policy

### LESSON 4

4-1 EMT-Basic, Student Activities section

4-2 Laws of Learning

### LESSON 5

5-1 Pre-Registration Form, Student Information Survey

### LESSON 6

6-1 Giving Instructions

6-2 Demonstration Checklist

6-3 Behavioral Terms for Writing Objectives

6-4 ABCDs... Questions to Ask About Your Objectives

### LESSON 7

7-1 Survey Instrument (Course Evaluation)

7-2 Epinephrine Auto-Injector Skill Sheet

# APPENDIX B

## LESSON 8

| | |
|---|---|
| 8-1 | Instructional Methods |
| 8-2 | Sample Action Plan |
| 8-3 | Preparing to Teach |
| 8-4 | Mini-Presentation Checklist |

## LESSON 9

| | |
|---|---|
| 9-1 | Training Media Reference |
| 9-2 | How to Design Transparencies |
| 9-3 | Tips for Overhead Projection |
| 9-4 | How to Operate an LCD Panel |
| 9-5 | Successful Slide Presentations |
| 9-6 | Tips for Video and Film Presentations |
| 9-7 | Troubleshooting Guide |

## LESSON 10

| | |
|---|---|
| 10-1 | Sample Lesson from EVOC and EMT-Basic |
| 10-2 | Sample Remediation sheet from EMT-B, Appendix G |
| 10-3 | Sample Enrichment sheet from EMT-B, Appendix F |

## FINAL PRESENTATION

Student Presentation Evaluation Form

End-of-Lesson Evaluation Form

End-of-Course Evaluation Form

## PRE-COURSE CHECKLIST

- Physical surroundings; are they comfortable?
- Is the evacuation plan posted?
- Is the seating arrangement conducive to the type of interaction proposed in the lesson plan?
- Is the lesson plan current?
- Are the necessary supplies available?
- Are the training aids organized?
- Is the AV equipment operational?
- Is the instructor/classroom appearance appropriate?
- Are there enough handouts for scheduled activities?

# ATTACHMENT 3

## National Registry of Emergency Medical Technicians

6610 Busch Blvd.
P.O. Box 29233
Columbus, OH 43229

## PURPOSE OF ESTABLISHMENT

This establishment is nationally recognized for certifying emergency medical technicians (EMTs). EMT candidates undergoing examination for certification will have completed a training program which included didactic instruction, clinical instruction, and supervised field internship.

Overall goals of this establishment are to promote and improve delivery of emergency medical services by assisting in development and evaluation of educational programs to train EMTs, establishing qualifications for eligibility for applying for certification, preparing and conducting examinations designed to ensure the competence of EMTs, establishing a system of recertification every two years, establishing procedures for revocation of certification for cause, and maintaining a national directory of registered EMTs.

Certification is dependent on competency according to recommended standards at three progressive levels. Of the three competency levels for which this establishment tests, the EMT\AMBULANCE is least intrusive. The second level, the EMT\INTERMEDIATE, requires more skill and competency than the EMT\AMBULANCE, yet not as much as the EMT\PARAMEDIC, the highest level. It is assumed the higher skill levels will encompass all lower skill levels. All EMTs work under the direct supervision of a physician.

Approximately 42,000 persons are examined per year for competency at the BASIC level. At the INTERMEDIATE and PARAMEDIC level, there are approximately 10,000 persons tested each year. Pass rate at the BASIC level is about 74%. Pass rates at the INTERMEDIATE and PARAMEDIC levels range from 68% to 71%.

## PERSONNEL POLICIES

This establishment in its determination of adequate program guidelines and certification does not get involved in hiring of EMTs, thus personnel policies for this establishment will not be addresses.

## EXAMINATION FOR CERTIFICATION

For the purpose of evaluation and subsequent certification, this establishment administers both written and practical examinations.

The written examination containing 150 questions, generally allows up to two and one half hours for completion. Written examinations are based on materials learned in the EMT/Paramedic training programs. Content is based on expected skill acquisition at the level for which the candidate is tested. For the EMT/Ambulance, content covers: patient handling and transportation, anatomy/physiology, patient assessment, breathing, resuscitation, cardiac arrest and cardiopulmonary resuscitation, soft tissue injuries, bleeding shock, pneumatic counter pressure device, medical emergencies, injuries to the head, face, neck, spine, chest, abdomen and genitals, fractures and dislocations, environmental emergencies, burns, hazardous materials, emergency childbirth, and psychological aspects of being an EMT.

The written examination for the EMT/Intermediate is composed of 150 multiple-choice questions covering all areas encompassed at the EMT/Ambulance level. In addition, roles and responsibilities, EMS systems, medical/legal considerations, medical terminology, EMS communications, patient assessment, airway management and ventilation, and the assessment and management of shock are covered.

The written examination for the EMT/Paramedic also contains 150 questions which cover all skill and knowledge expectancies of the two previous levels. It also assesses knowledge of the pre-hospital environment, preparatory, trauma, medical cardiology, OB/GYN, neonatal, and behavioral emergencies. All written examinations are controlled and monitored by designated examiners. All answers are recorded on answer sheets. Directions for test use are written on backs of test booklets and are provided orally at examination sites. All booklets must be returned at the end of the test. The written examination appears to be directly related to curriculum guidelines designed to accomplish competency at the various levels.

The practical part of the examination is set up to simulate actual emergency and life-threatening situations; it assesses skill acquisition in terms of knowledge of emergency procedures; one's ability to stay calm in stressful situations; one's ability to attend to minute, but important details; and, above all, one's ability to integrate information quickly, regarding a patient's condition, and prioritize as to what is the most effective treatment for each patient's unique needs. Participants in the practical examination are expected to demonstrate proper use of various equipment and techniques, to include the Kindrich Extrication Device using a life model; intravenous therapy using mannequins, and the use of defibrillation/cardiac monitoring equipment.

Participants are also required to respond orally in assessing trauma situations. Finger dexterity, with the ability to manipulate small items such as intravenous needles, is assess by observation. The ability to read graphs, operate life-saving equipment, read medication dosages, determine dosages based on patient's weight, listen to breathing patterns, and the ability to see all associated activity are areas which are evaluated.

## ENVIRONMENTAL CONDITIONS

In the analyst's opinion, the general environment conditions in which an EMT works could not be adequately assessed in an indoor evaluative environment. EMT/Paramedics in actual situations are exposed to a variety of hot and cold temperatures and may be, at times, exposed to hazardous fumes. They may be required to walk, climb, crawl, bend, pull, push, or lift and balance over less than ideal terrain. EMT/Paramedics are exposed to a variety of noise levels, which at times can be quire high, particularly when multiple sirens are sounding.

## WORKER CHARACTERISTICS

EMT/Paramedics work as part of a team. Thorough knowledge of theoretical procedures and ability to integrate knowledge and performance into practical situation are critical. Self-confidence, emotional stability, good judgement, tolerance for high stress, and a pleasant personality are also essential characteristics of the successful EMT at any level. EMTs also must be able to deal with adverse social situations which include responding to calls in districts known to have high crime rates.

## PHYSICAL DEMANDS

Aptitudes required for work of this nature are good physical stamina, endurance, and body condition which would not be adversely affected by having to lift, carry, and balance at times, in excess of 125 pounds (250, with assistance). EMT/Paramedics must be able to work twenty-four hour long shifts. Motor coordination is necessary because over uneven terrain, both the patients' and the EMT/Paramedics', as well as other workers, well-being must not be jeopardized.

## COMMENTS

Driving the ambulance in a safe manner, accurately discerning street names through map reading, and the ability to correctly distinguish house numbers or business locations are essential to task completion in the most expedient manner possible. Use of the telephone for transmitting and responding to physician's advice is also essential. The ability to concisely and accurately describe orally to physicians and other concerned staff one's impression of patient's condition is critical as EMT/Paramedics work in emergency conditions in which there may be no time for deliberation. EMT/Paramedics must also be able to accurately summarize all data in the form of a written report. Verbal and reasoning skills are used more extensively than math. Math does play a part, however, in determining medication ratios per patient's body weight.

# JOB ANALYSIS SCHEDULE

1. **ESTABLISH JOB TITLE**: Emergency Medical Technician (Medical Services) EMT/Ambulance, EMT/Intermediate, EMT/Paramedic.

2. **INDIVIDUAL ASSIGNED**: Cathy Cain

3. **CODE 079026 WTA Group**: Occupations in medicine and health

4. **JOB SUMMARY**: Administers life support care to injured and sick persons in pre-hospital settings as authorized and directed by physician. Assesses nature and extent of injury or illness to establish and prioritize medical procedures to be followed.

5. **WORK PERFORMED RATINGS**:

Worker Functions    Data    People    Things
3 7 4

Work Field: 930

M.P.S.M.S: 939 Medical and other health services. (Materials, Products, Subject Matter, and Services)

6. **WORKER TRAITS RATINGS**:

Scale: Level 6, highest level; level 1, lowest level.

G.E.D. 1 2 3 [✓ 4] 5 6

General Education Development

Overall Rating - Level 4

**Reasoning development (R)**

Level 4 - Apply principles of rational systems to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Interpret a variety of instructions furnished in written, oral, diagrammatic, or schedule form.

*NOTE: There appears to be components of level 5 in terms of dealing with several abstract and concrete cartable. There were not enough components to rate this as a level 5.

**Mathematical development (M)**

Level 3 - Compute discount, interest, profit, and loss; commission, markup, and selling price; ratio and proportion and percentage. Calculate surfaces, volumes, weights, and measures.

**Language development (L)**

Level 4 - Reading: Reads novels, poems, newspapers, periodicals, journals, manual, dictionaries, thesauruses, and encyclopedias.

**Writing**: Prepare business letters, expositions, summaries, and reports, using prescribed format and conforming to all rules of punctuation, grammar, diction, and style.

**Speaking**: Participate in panel discussions, dramatizations, and debates. Speak extemporaneously on a variety of subjects.

*NOTE: In the analyst's opinion, the General Educational Development level appears to be an area in which skill levels could be separated, particularly the math. Precise reading of medications, however, is essential, i.e., Tylenol vs. Tegretol.

SVP: 1 2 3 4 5 6 7 8 9

Special Vocational Preparation (Time requirement)

Level 4 - Over three months and including six months (BASIC)

Level 5 - Over six months and including one year (INTERMEDIATE and PARAMEDIC).

Aptitudes: G 3 V 3 N 3 S 3 P 2 Q 2/3 K 2 F 1/2 M 2 E 2 C 1

Scale: Level 1, highest degree of particular aptitude; level 5, lowest degree of particular aptitude.

**G - Intelligence**

Level G-3:1 Renders general nursing care to patients in hospital, infirmary, sanitarium, or similar institutions:

Intelligence is required to learn and apply principles of anatomy, physiology, microbiology, nutrition, psychology, and patient care used in nursing; to make independent judgements in absence of doctor; and to determine methods and treatments to use when caring for patients with varying illnesses or injuries.

### V - Verbal Aptitude

Level V-3:9 Questions patients to obtain their medical history, personal data and to determine if they are allergic to dental drugs or have any complicating illnesses. Converses with patient in reassuring manner; explains post-operative care, oral hygiene, and importance of preventative dentistry to patients.

**N - Numerical Aptitude** (The ability to perform arithmetic operations quickly and accurately)

Level 3 - No illustrations in paramedic field.

Level N-3:2 Treats patients with disabilities, disorders, and injuries to relieve pain, develop or restore function, and maintain maximum performance, using physical means such as exercise, massage, heat, water, light, and electricity as prescribed by physician:

Numerical aptitude is required to interpret clinical tests such as range of motion, muscle response, and functional tests to ascertain extent of physical loss; to determine intensity and duration of manual or mechanical therapy treatment or procedures such as weight lifting, diathermy, traction, or electro-therapy.

### S - Spatial Aptitude

Level S-3:1 Treats patients with disabilities, disorders, and injuries to relieve pain, develop or restore function, and maintain maximum performance, using physical means such as exercise, massage, heat, water, light, and electricity, as prescribed by doctor:

Spatial aptitude is required to visualize anatomic positions and the relationship between the point of forces and the area affected (as in traction); and to place treatment devices or administer manual treatment in relationship to the affected body part.

### P - Form Perception

Level P-2:6 Diagnoses and treats diseases and disorders of animals. Ability to make visual comparisons and discriminations and see slight differences in shapes and shadings of figures and widths and lengths of lines. Form perception is required to perceive pertinent details of size, shape, and form in skeletal structure, organs, tissue, and specimens of various animals.

### Q - Clerical Perception

Level Q-2:19 (for Paramedic and Intermediate) - Renders general nursing care to patients in hospital, infirmary, sanitarium, or similar institutions:

Notes pertinent detail in written instructions, especially amounts and strengths of medications to administer; accurately perceives numbers when reading instruments, preparing medications, and filling syringes for injections; accurately records data on patients' charts such as temperature, respiration, pulse count, blood pressure, medications and dosage administered.

Level Q-3:3 (for Basic) - Prepares and compiles records in hospital nursing unit, such as obstetrics, pediatrics, or surgery.

Clerical perception is required to post information to patients' charts from doctors' and nurses' notes and laboratory reports; to file charts in chart racks; to make up daily diet sheet for unit; and to maintain inventory of drugs and supplies.

### K - Motor Coordination

K-2:5 Renders general nursing care to patients in hospital, infirmary, sanitarium, or similar institutions:

Coordinates vision and finger and hand movements to give injections with hypodermic needle, medication, position or remove dressings, and to measure medicines.

### F - Finger Dexterity

F-1:2 (Intermediate and Paramedic) - Performs surgical operations upon human body:

Finger movements of one hand are required to locate broken or cut blood vessels, to position vessel and place ligature about it, and to tie one of several types of knots in ligature to stem flow of blood from vessel.

F-2:8 (Intermediate and Paramedic) - Performs chemical, microscopic, and bacteriological tests to provide data for use in treatment and diagnosis of disease:

Finger dexterity is required to use fingers to tie tourniquet about upper arm, locate vein below tourniquet near surface of skin; insert needle into vein; release tourniquet; and withdraw plunger of syringe to obtain amount of blood required for type of test to be performed.

No description for Basic, however, Level 2 is recommended due to ability to wrap bandages and apply splints.

### M - Manual Dexterity

Level M-2:12 Renders general nursing care to patients in hospital, infirmary, sanitarium, or similar institution. Controls and extinguishes fires, protects life and property, and maintains equipment as volunteer or employee of city, township, or industrial plant. Manual dexterity is required during emergency situations, in positioning ladders and nets; clasping rungs to climb ladders; and in giving artificial respiration.

### E - Eye-Hand-Foot Coordination

No description given. Level 2 recommended as job may require balancing of ladders, stairs, or on uneven terrain while carrying patient. Eye-Hand-Foot coordination required to permit ambulance operation and balancing, lifting, positioning, and transporting patient.

### C - Color Discrimination

C-1:4 Performs surgery to correct deformities, repair injuries, prevent diseases, and to improve functions in patients:

Uses color discrimination and color memory in making diagnosis of patients' affliction or condition, by recognizing any deviations in color of diseases tissue from healthy tissue; evaluating color characteristics such as hue and saturation of affected body parts; and making determination as to extent or origin of condition.

Temperaments D F I J M P R S T V

J - Adaptability to making generalizations, evaluations, or decisions based on sensory or judgmental criteria.

M - Adaptability to making generalizations, judgements, or decisions based on measurable or verifiable criteria.

P - Adaptability to dealing with people beyond giving and receiving instructions.

S - Adaptability to performing under stress when confronted with emergency, critical, unusual, or dangerous situations; or in situations in which working speed and sustained attention are 'make or break' aspects of the job.

T - Adaptability to situations requiring the precise attainment of set limits, tolerances, or standards.

V - Adaptability to performing a variety of duties, often changing from one task to another of a different nature without loss of efficiency or composure.

Interests 1a 1b 2a 2b 3a 3b 4a 4b 5a 5b

2b - A preference for activities of a scientific and technical nature.

4b - A preference for working for the presumed good of the people.

Physical Demands S L M V 2 3 4 5 6

Explanation of terms:

1. Strengths
2. Climbing and/or balancing
3. Stooping, kneeling, crouching and/or crawling
4. Reaching, handling, and fingering and/or feeling
5. Talking and hearing
6. Seeing

Environmental Conditions I O B 2 3 4 5 6 7

Explanation of terms:

1. Work location (1 = Indoors, O = Outdoors, B = Both)
2. Extreme cold, with or without temperature changes
3. Extreme heat, with or without temperature changes
4. Wet and/or humid
5. Noise and/or vibration
6. Hazards
7. Atmospheric conditions

## U.S. DEPARTMENT OF LABOR
## MANPOWER ADMINISTRATION

### Physical Demands and Environmental Conditions

ESTAB. JOB TITLE EMT-Paramedic ESTAB. & SCHED. NO.
DOT TITLE & CODE 079.010

Code: F = Frequently
O = Occasionally
NP = Not present

### PHYSICAL DEMANDS

**1. STRENGTH**

a. Standing 45%
Walking 50%
Sitting 5%

b. Lifting F
Carrying F
Pushing O
Pulling O

### COMMENTS

1a. Very little time is spent sitting down, except for incident report writing.
1b. EMTs are required to assist in lifting and carrying injured or sick persons to ambulance, removal from ambulance, and into emergency care setting.

2. **CLIMBING** F
**BALANCING** F

### COMMENTS

2. Climbing and balancing are required for safe transport of patient.

| | | |
|---|---|---|
| 3. | **STOOPING** | F |
| | **KNEELING** | F |
| | **CROUCHING** | F |
| | **CRAWLING** | F |

**COMMENTS**

3. Patients are often found injured or sick in locations where removal is possible only through EMT's stooping, kneeling, crouching, or crawling.

| | | |
|---|---|---|
| 4. | **REACHING** | F |
| | **HANDLING** | F |
| | **FINGERING** | F |
| | **FEELING** | F |

**COMMENTS**

4. Transporting life saving equipment, arm extension, handling carefully patients in fragile conditions, feeling to assess vital signs are part of the nature of this position.

| | | |
|---|---|---|
| 5. | **TALKING** | |
| | Ordinary | F |
| | Other | NP |
| | **HEARING** | |
| | Ord. Conv. | F |
| | Other Sounds | F |

**COMMENTS**

5. Responding to patients, physicians, and co-workers through hearing is necessary in transmitting patient information and following directions.

| | | |
|---|---|---|
| 6. | **SEEING** | |
| | Acuity, Near | F |
| | Acuity, Far | F |
| | Depth Perception | F |
| | Accommodation | F |
| | Color Vision | F |
| | Field of Vision | F |

**COMMENTS**

6. Sight is used to drive ambulances, distinguish landmarks, and visual inspection of patients.

**RATINGS**: S L M H VH 2 3 4 5 6

**Analyst** Cathy Cain Date 1/25/92 **Estab. Reviewer**
**Reviewer Date Title Date**

7. **GENERAL EDUCATION**: High School graduate or equivalent. Must be at least 18 years old.

8. **VOCATIONAL PREPARATION**:

a. College: None, however, some EMT courses are taught at local colleges.

b. Vocational Education Courses: For EMT/Ambulance - 110 hours specialized training. For EMT/Intermediate -90 -110 additional hours specialized training. For EMT/Paramedic - 750 - 1,000 additional hours specialized training.

c. Apprenticeship: None

d. Implant Training: None

e. On-the-Job Training: During course of training, students will have engaged in various clinical experiences in supervised hospital and field settings. Amount of time spent varies.

f. Performance on Other Jobs: None

9. **EXPERIENCE**: None

10. **ORIENTATION**: None

11. **LICENSES, ETC.**: Certification or Licensure

12. **RELATION TO OTHER JOBS AND WORKERS**:

Promotion: From EMT/Ambulance to EMT/Intermediate to EMT/Paramedic (based on training)

Transfers: None

Supervision Received: Physicians

Supervision Given: None

13. **MACHINES, TOOLS, EQUIPMENT, AND WORK AIDS**:

Ambulance, radio/telephone, extrication devices, cardiac monitors, defibrillator, electrocardiograph, intravenous tubing, injection needles, pneumatic ant-shock garments, stretchers, "jaws-of-life".

14. **MATERIALS AND PRODUCTS**: Intravenous fluids, bandaging tape.

## ATTACHMENT 6

## Examination Accommodations

## Disability Policy

The National Registry of EMTs offers the following recommendations regarding the EMT program application process:

The National Registry of EMTs recommends that all applicants to EMT programs complete an aptitude test battery (e.g. General Aptitude Test Battery (GATB), Differential Aptitude Test (DAT) and a standardized achievement measure (e.g. Woodcock Johnson-Revised Tests of Achievement; Wide Range Achievement Test-Revised). Such measures assess many of the capacities and abilities necessary to competently perform the responsibilities of the EMT such as: general learning ability; verbal numerical and spatial ability; form and clerical perception; motor coordination; finger and manual dexterity; eye-hand-foot coordination; color discrimination. In instances where test barriers are not administered prior to admission to EMT training programs, NREMT recommends that such tests be administered at appropriate times as determined by state/training program policies. The National Registry also recommends that vocational counselors be available to applicants to interpret the results of the testing and provide guidance in terms of the advisability of proceeding with the EMT training program.

## Eligibility for Accommodations for Registration Due to Disability

The National Registry of EMTs will offer reasonable and appropriate accommodations for the written component of the registration examination for those persons with documented disabilities.

### I. Learning Disabilities

Those persons requesting accommodations for the written component of the registration examination must submit documented evidence of a learning disability prior to the examination. Based upon a thorough analysis of the written examination it has been determined that persons with learning disabilities manifested in the academic areas of reading decoding or reading comprehension may be eligible for special test accommodations. Other areas in which learning disabilities may be evidenced (e.g. mathematics calculations, mathematics applications, written expression, oral expression, listening comprehension) should not negatively impact upon one's performance on the written examination due to the format (multiple choice) and content.

Documentation of a specific learning disability must include one of the following:

1. Evidence of a previously documented learning disability which would negatively impact one's performance on the written examination, specifically in the reading areas (i.e. reading decoding or reading comprehension). Such documentation must include at least one of the following:

A. Diagnosis of a learning disability in the area of reading decoding and/or reading comprehension based upon the results of standardized psychoeducational assessment including an appropriate standardized measure of achievement in reading decoding and/or reading comprehension. A learning disability is defined as one of the following: 1) standard scores in reading decoding and or reading comprehension which are ar least one standard deviation below the score obtained on the standardized test of intelligence; 2) evidence that an achievement ability discrepancy was not obtained due to some aspect of the learning disability such as a statistically significant abnormal discrepancy between Verbal and Performance abilities on the Wechsler Adult Intelligence Scale - Revised. Results of previous and currently valid psychoeducational evaluations will be accepted as evidence. However, if no such assessment has been conducted, then the applicant is responsible for obtaining such documentation before any decision can be made by the National Registry of EMTs regarding the applicant's request for special accommodations; 3) a statistically significant deficit in some area of cognitive processing which would impact one's ability to successfully complete the NREMT examination as written. Such cognitive processing deficits should be documented through appropriate standardized testing.

2. School and/or work records which demonstrate that special education services or accommodations were provided due to a learning disability in the area of reading decoding and/or reading comprehension. Appropriate documentation of the learning disability will also be required.

Requests for accommodations on the NREMT written examination will be reviewed by a panel of consultants on a case-by-case basis. Accommodations on the written examination will be considered for those persons who meet the minimum standards for performance as determined by analysis of the requirements of the job as documented by standardized assessment measures. Please contact the National Registry for further information regarding minimum standards for performance.

## Types of Accommodations

The types of accommodations which may be requested by persons qualifying for special accommodations on the written examination due to documented learning disability are as follows:

National Registry of EMTs
Policy and Procedures

1. The National Registry of EMTs will permit those persons who qualify for special accommodations on the written examination due to documented learning disability (as described above) to take the standard format of the examination but receive an extended amount of time in which to complete the examination. Applications selecting this option will normally receive 3.75 hours versus the standard 2.5 hours.

2. Other appropriate accommodations may be granted with appropriate documentation of disability as deemed appropriate by a panel of consultants.

### Contextual (When, Where, Why)

The student will use this information throughout the course to enhance his understanding and provide direction for the EMT-Basic's relationship to the individual components of the EMS system. The lesson will provide the student with a road map for learning the skill and knowledge domains of the EMT-Basic. Additionally, this lesson will identify that not all students meet the mental and physical requirements of the career field. After completion of the course, the EMT-Basic will use this information to understand the process of gaining and maintaining certification, as well as understanding state and local legislation affecting the profession. This lesson sets the foundation for the remaining teaching/learning process. A positive, helpful attitude presented by the instructor is *essential* to assuring a positive, helpful attitude from the student.

## STUDENT ACTIVITY

### Auditory (Hear)

1. Students will hear specifically what they can expect to receive from the training program.
2. Students will hear the specific expectations of the training program.
3. Students will hear actual state and local legislation relative to EMS practice and certification.

### Visual (See)

1. Students will see audio-visual aids or materials explaining the components of the health care system, EMT-Basic level of care, EMT-Basic's roles and responsibilities, professional attributes, and certification requirements.
2. Students will receive a copy of the cognitive, affective and psychomotor objectives for the entire curriculum.
3. Students will receive the final skill evaluation instruments.

### Kinesthetic (Do)

1. Students will practice situations in which EMT-Basics portray professional attributes and experience ethical dilemmas.
2. Students will complete the necessary course paperwork.
3. Students will indicate if they will require/request assistance during the course or certification process based on the Americans with Disabilities Act. Additionally, students will provide the necessary documentation to support the requirements/request.

## LAWS OF LEARNING: "THEY SAID..."

In scientific or educational terminology, an observation that has been so widely and frequently confirmed that it is universally accepted is call a "law." Below, you will find a list of the laws of learning. They are presented here as capsule reminders of what happens in the minds, hearts, and guts of learners during the learning process.

In teaching and learning, all things being equal:

A. Learning will frequently be determined by biases the individual has. (Prior contradictory learning makes new learning much tougher and requires great patience on the part of the instructor while the student struggles with old concepts to which s/he has committed him/herself.) (Law of Mind-set)

B. First impressions are vital and lasting. (Law of Primacy)

C. Learning occurs best when the student is ready—physically, mentally and emotionally. (Law of Readiness)

D. Students will tend to repeat behaviors which have pleasant consequences. (Law of Readiness)

E. Up to a point, anxiety increases learning; beyond it is detrimental. This point varies from student to student and situation to situation. (Law of Anxiety)

F. New learning occurs best when related to already known material (as long as the new and old information aren't contradictory). (Law of Intensity)

G. Vivid, dramatic experiences are more likely to be remembered. (Law of Intensity)

H. Retention is best when there is active involvement on the part of the learner. (Law of Exercise)

I. The more times a thing is repeated, the more likely it is to be learned. (Practice makes perfect? Practice makes permanent. *Perfect* practice makes perfect!) (Law of Repetition)

J. Forgetting is thought to be caused by interference—old knowledge destructively mingling with new knowledge. (Retroactive interference occurs when new learning interferes with the recall of old learning. Proactive interference is when old knowledge interferes with the recall of new knowledge. Interactive interference is when old and new knowledge interfere with the recall of intermediate knowledge. Reactive interference is the negative effects of attitudes or feelings on remembering.) (Laws of Interference)

## DOT INSTRUCTOR TRAINING PILOT COURSE

## PRE-REGISTRATION FORM

Course Preference (1 indicates first choice; 2 second):
_____ Gaston
_____ Rowan

If at all possible, we will get all students into their first choice for course location. If you only will consider taking the course at your first choice location, please mark only your first choice above.

Student Name:

Student Address:

Phone: Day:_________________ Night:_______________

Provider Affiliation:

Position Currently Held:

Provider Address:

Current Certification Level:
____ EMT-A
____ EMT-D
____ EMT-I
____ EMT-P
____ EMT-AI
____ Other:__________

Other Current Certifications: (PALS, ACLS, BTLS, etc.):

Please describe the number and types of courses you have taught in the past 3 years. Include the name of the agency(ies) for which you have taught.

Continued on Next Page

Have you had any courses in teaching methodologies before: ____ Yes
____ No

If yes, please give course title(s) and when and where you took it:

Sponsorship:

I (print name), ________________________________________ agree that the student submitting this pre-registration is an appropriate candidate for the DOT Instructor Training Program pilot being held October 12, 13, 14, 26, and 27, 1995 and recommend them for participation in this course.

Signature: ________________________________

Title: ________________________________

Agency: ________________________________

Phone: ________________________________

Pl;ease return the pre-registration form ASAP to:

Rebecca R. Yarbrough
Emergency Services Program Administrator
Centralina Council of Governments
Post Office Box 35008
Charlotte, NC 28235

## GIVING INSTRUCTIONS

As instructors, we give the students in our courses tasks to accomplish, in the form of assignments, activities, and projects. In EMS instruction, those tasks often simulate on-the-job duties that the EMS student will perform. These guidelines for giving instructions apply to both situations.

1. INTRODUCE THE TASK WITH A RATIONALE. Explain from the learner's point of view, why the material they are about to learn is important to them. This explanation helps participants get ready to work.

2. EXPLAIN THE TASK. Describe the activity learners will participate in. The task description tells what they will do. For more difficult or complex tasks, you may need to provide a teaching aid, such as a checklist, overhead, or handout.

3. SPECIFY THE CONDITIONS. This helps learners accomplish the learning by defining the limits of the task. The context specifications tell them how they will do the work, e.g., as a team or individually. The conditions also specify what the outcome(s) will be and what constitutes successful completion.

4. EXPLAIN HOW RESULTS WILL BE USED. Tell the learner how the outcomes of this task relate to the overall goals that are being accomplished.

   In the classroom, tell participants whether the results from a task should be reported back to the main group, used in another activity, processed within the small group, or are for individual reference.

## DEMONSTRATION CHECKLIST

### Preparation of the Trainee

___ Put the learner at ease

___ Covered the necessary background information

___ Got him or her interested and willing to learn

### Demonstration

___ Procedure visible to all students

___ Steps clearly identified and explained

___ Stressed key points

### Practice

___ Had the learner explain key points

___ Corrected errors

___ Demonstrated competence in the use of corrective feedback

___ Repeated instructions as necessary

### Summary

___ Summarized the main points of the lesson

___ Asked for further questions

## BEHAVIORAL TERMS FOR WRITING OBJECTIVES

- Add
- Analyze
- Answer
- Apply
- Arrange
- Ask
- Assemble
- Assist
- Bisect
- Categorize
- Choose
- Classify
- Compare
- Compute
- Construct
- Convert
- Criticize
- Defend
- Define
- Demonstrate
- Design
- Detect
- Develop
- Diagram
- Differentiate
- Discuss
- Distinguish
- Draw
- Estimate
- Extrapolate
- Generate
- Identify
- Illustrate
- Indicate
- Install
- Interpolate
- Label
- Locate
- Manipulate
- Match
- Measure
- Name
- Operate
- Order
- Organize
- Outline
- Perform
- Plan
- Predict
- Practice
- Prepare
- Present
- Produce
- Recall
- Recognize
- Reconstruct
- Reduce
- Remove
- Revise
- Select
- Share
- Show
- Solve
- Sort
- Specify
- State
- Suggest
- Support
- Synthesize
- Tabulate
- Time
- Transfer
- Translate
- Transmit
- Validate
- Verbalize
- Verify
- Weigh
- Write

## ABCD...QUESTIONS TO ASK ABOUT YOUR OBJECTIVES

### Audience

Have I specified for whom the objective is intended?

Yes No

If no, who is the trainee? Specify the trainee in the objective.

### Behavioral

Have I stated an observable behavior, which describes what the trainee will do (in the "real world") after instruction?

Yes No

If no, what will the trainee do? Specify the behavior in the objective (see Handout 2 for help).

### Conditions

Have I described the learning environment and tools which will be provided to the trainee in order to be able to perform the behavior?

Yes No

If no, what equipment, tools, aids or references (if any) will the trainee be able to use? Are there other special conditions (e.g. outside, in the heat of fire, etc.) List those tools and conditions in the objective.

### Degree

Have I stated the standards for measuring acceptable performance?

Yes No

If no, what are the time limits, percentages/ranges of accuracy, number of correct responses, or other qualitative standards for performance? State them in the objective.

# COURSE EVALUATION

PURPOSE: It is our objective to present a useful and effective training course. You are the final authority on whether that objective has been met. Your completion of this form, therefore, will play an important part in our future planning. Please do not feel bound to limit your remarks to questions on this form. Your comments on any aspect of the course will be appreciated.

**Course** INSTRUCTOR TRAINING COURSE

**Dates**

| **RESPONSES** (Check the response closest to your opinion) | | Strongly Agree | Agree | Disagree | Strongly Disagree | Not Applicable |
|---|---|---|---|---|---|---|
| 1. Course material was | a. Well organized | | | | | |
| | b. Complete and appropriate | | | | | |
| | c. Readable (printed well) | | | | | |
| 2. Audio visual materials were: | a. Related to the course | | | | | |
| | b. Good quality | | | | | |
| | c. Sufficient in number | | | | | |
| 3. Course | a. Was a reasonable length | | | | | |
| | b. Was worth recommending to others | | | | | |
| | c. Contributed to my knowledge and skills | | | | | |
| | d. Accomplished announced purpose | | | | | |
| 4. Instruction | a. Subject was thoroughly covered | | | | | |
| | b. Course objectives were clear | | | | | |
| | c. Exercises were appropriate | | | | | |
| | d. Time in class was spent effectively | | | | | |
| | e. Participation was encouraged | | | | | |
| 5. Classroom | a. Was comfortable | | | | | |
| | b. Included a manageable number of students | | | | | |
| | c. Was appropriate for this course | | | | | |
| 6. Instructor | a. Was prepared for class | | | | | |
| | b. Stimulated my interest in subject area | | | | | |
| | c. Made course a worthwhile learning experience | | | | | |

Remarks

BEST COPY AVAILABLE

## COURSE EVALUATION (Continued)

7. Overall instructor evaluation (Check your opinion)

| | | | | |
|---|---|---|---|---|
| a. Knowledge of the subject | ☐ excellent | ☐ good | ☐ fair | ☐ poor |
| b. Ability to teach | ☐ excellent | ☐ good | ☐ fair | ☐ poor |

8. Would you add or emphasize any subject matter areas in subsequent course sessions?

☐ No ☐ Yes, list these areas and give your reasons.

9. Would you delete or de-emphasize any subject-matter areas?

☐ No ☐ Yes, list these areas and give your reasons.

10. Other comments. Please provide any comments, either general or specific, that you would like to make relative to this course.

| | | |
|---|---|---|
| Signature and Title | Organization | Date |

## EPINEPHRINE AUTO-INJECTOR

| | Points Possible | Points Awarded |
|---|---|---|
| Takes or verbalizes body substance isolation | 1 | |
| Contacts medical direction for authorization | 1 | |
| Obtains patient's auto-injector | 1 | |
| Assures injector is prescribed for the patient | 1 | |
| Checks medication for expiration date | 1 | |
| Checks medication for cloudiness or discoloration | 1 | |
| Removes safety cap from the injector | 1 | |
| Selects appropriate injection site (thigh or shoulder) | 1 | |
| Pushes injector firmly against site | 1 | |
| Holds injector against site for a minimum of ten (10) seconds | 1 | |
| Properly discards auto-injector | 1 | |
| Verbalizes monitoring the patient while transporting | 1 | |
| **TOTAL:** | 12 | |

**CRITICAL CRITERIA:**

___ Did not contact medical direction for authorization
___ did not check medication for prescription, cloudiness or discoloration
___ Did not use an appropriate injection site
___ Used the injector against the injection site for ten (10) seconds or longer
___ Did not discard auto-injector into appropriate container

# INSTRUCTIONAL METHODS

| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| **PRESENTATION FORMS** | | | | | |
| Lecture | Instructor presents concepts and methods or demonstrates skills. | Presenting new material. | High instructor control<br>Less time consuming | Limited opportunities for interaction<br>Decreased retention. | 1. Keep it brief.<br>2. Enhance with visual aids.<br>3. Plan regular opportunities for interaction (including strategies below). |
| Reading Assignments | Trainees read material before or during class. | Before Class-highly motivated trainees in familiar subject area.<br>During Class-Brief items-anecdotes for discussion or background for exercises. | Before class - Allows trainees to learn material at their own pace. Covers pre-requisites.<br>During-Avoids instructor read aloud and gives trainees point of reference during exercises. | Cannot ensure that material will be read prior to class. Perceived as burden by trainees.<br>During Class-Can be time consuming. Low interactivity. | 1. Choose before-class reading only when absolutely necessary. Enlist supervisor support and require written exercise to enhance memory.<br>2. Keep in-class reading brief and practice or discussion related. Check on comprehension (ask for summary) and allow enough time for trainees who read more slowly. |

| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| **DISCUSSION FORMS** | | | | | |
| **Structured Inquiry** | Instructor asks questions or poses problems to guide the session. | Exploring implications of material presented or enhancing lecture. | Moderately interactive.<br>Moderate instructor control.<br>Allows trainees to "drive" presentation. | Frustrating if there is only one right answer or if trainees don't know answers.<br>Participation concentrated among most confident trainees. | 1. Plan for questions as part of your presentation.<br>2. Choose questions that have more than one correct response (e.g. lists) and that trainees are likely to know (review, personal experience).<br>3. Mix approaches: allow trainees to think about and write down responses, group discussion and response, round robins (everybody answers in turn). |
| **Discussion**<br>Whole Group and Small Group | Trainees address issues, ideas, applications, problems with questions or comments. | Solving problems, making decisions, encouraging group identity. | Highly interactive.<br>Strengthens group identity.<br>Fosters problem solving skills. | Participation concentrated among most confident trainees.<br>Can be time consuming. | 1. Choose whole group for narrow discussion topic or for important issues for the whole group.<br>2. Choose small groups for broader discussion, emotionally charged issues, and tasks.<br>3. Keep the goal clear.<br>4. Resist the temptation to become a group member. |

| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| **DEMONSTRATION** | | | | | |
| Demonstration | Instructor shows a process to be learned or the way something works | Presenting standard procedures and processes | High instructor control<br>Applies learning<br>Links instruction to applications | Time consuming<br>Can be difficult to view with large groups | 1. Create a viewing area that is visible to all students<br>2. Clearly identify all steps and stress key points<br>3. Ask learners to reiterate key points<br>4. Have learners practice and correct errors |
| **SIMULATION** | | | | | |
| Role Plays<br>Simulations | Role play—Trainees act the parts of other people in a dramatized situation.<br>Simulation-Trainees act as themselves in unfamiliar conditions or observe dramatized situations (as in videotape). | Practicing unfamiliar behavior, linking concepts presented to real situations, or awareness of results of behavior. | Intensive participation.<br>Fosters learning in the affective domain.<br>Facilitates transfer of learning. | Can be time-consuming.<br>Not useful if students do not participate fully. | 1. Give trainees a structure in the form of a case study or script and guidance in the form of modeling.<br>2. Process experience after role play, link to objectives and real-world situations. |
| Experiential Learning | Trainees reflect on experiences inside the training environment. | Thinking about or learning from group dynamics or behavior being modeled as in general class experience, team building exercise, simulation, or role play. | Highly interactive.<br>Moderate instructor control.<br>Classroom is model for trainees to use experimenting and discovering. | Emotional content requires advanced facilitation skills.<br>Risk of getting sidetracked.<br>Can be time-consuming. | 1. Focus. Know precisely what experiences trainees should reflect on and explain clearly how trainees should use the experiences.<br>2. Make sure learning is tied to objectives.<br>3. Be cautious of using emotionally charged experiences. |

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| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| **Field Trips** | Trainees visit a site for instructional purposes. | Giving trainees exposure to a real-world setting. | Links instruction to conditions where it will be applied. | Time consuming.<br>Limited trainee participation.<br>Risk of getting side-tracked. | 1. Explain how trip is related to instructional objectives.<br>2. Give trainees something to do or observe at the site.<br>3. Follow up after trip to reinforce. |
| **COOPERATIVE LEARNING** | | | | | |
| **Brainstorming** | Group generates ideas without judging in a timed environment. | Stimulating new ideas.<br>Enhancing creativity. | Active participation.<br>Easy to prepare.<br>Encourages ownership of problem and solutions. | May confuse and frustrate if ideas are not used later. | 1. Instruct students to withhold judgment<br>2. Instruct students that quantity and variety are the goals, not quality.<br>3. Describe up front how ideas will be used and that not all ideas can be used. |
| **Team Development** | A formal attempt to improve the interaction of existing work groups | Building teamwork<br>Increasing cooperation<br>Decreasing destructive conflict | Addressees obstacles to new behavior<br>Encourages application, results | Time-consuming<br>Resistance/emotions may be high<br>Must be followed up | 1. Assess readiness of group for change.<br>2. Build and maintain support for effort.<br>3. Help team focus on communication and purpose of the group.<br>4. Require projects requiring team work, reflect using experiential learning.<br>5. Get commitment, action plans. |

| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| **Small group projects** | Structured, defined goal that must be accomplished through group effort | Clearly defined, product-oriented, multi-faceted learning, such as a report, model, or presentation | Increases collaborative learning<br>Draws on diverse experience and expertise of group<br>Fosters sense of accomplishment | Participation can be concentrated among most confident members<br>Can be time-consuming | 1. Clearly define desired outcomes<br>2. Help the group focus, develop specific goals, and determine milestones |
| **PROBLEM SOLVING** | | | | | |
| **Case Studies and Critical Incidents** | Case Study-Develops and distributes a written description of a problem or situation.<br>A critical incident is similar but very brief. | Simulating reality or experience so that trainees can apply instruction. | Intense participation.<br>Applies learning.<br>Stimulates thought.<br>Improves problem-solving skills | Case studies-can be time-consuming, can be difficult to write.<br>Critical incidents-lack of detail can lead to extended explanations, result in wide variety of responses. | 1. Rely on people with experience in the area for realistic cases, key components of success or failure, and for review for accuracy.<br>2. Link case or incident closely to instructional objectives. |
| **Games** | Structured situation involving competition between two or more people or groups. | Competition motivates trainees.<br>Cooperation builds group identity, team problem solving skills, awareness of dynamics. | High trainee participation.<br>Increases appeal of "dry" material (as in material reviewed during a game show quiz). | Can be time-consuming out of proportion to objective's importance.<br>Can be time-consuming to develop. | 1. Estimate time for game carefully, weight its value in supporting objective and the value of the objective.<br>2. Rely on concepts from familiar games. Consult books designed for use by trainers (e.g. "Games Trainers Play") |
| **In-Basket Exercises** | A timed case study or simulation, in which individuals are given an in-basket containing written memos, letters, or messages and are asked to take action. | Evaluates problem-solving, decision making skills.<br>Evaluates time management. | Requires active participation.<br>Limited instructor role. | Can be time-consuming, costly and difficult to develop.<br>Learning curve for students who are not familiar with this type of exercise. | 1. Collect real life examples (modified to protect privacy if necessary).<br>2. Give clear, specific instructions. Allow students to work on brief example |

| METHOD | DEFINITION | BEST FOR: | ADVANTAGES | DISADVANTAGES | HOW TO |
|---|---|---|---|---|---|
| TUTORIAL | | | | | |
| **Computer-Assisted Instruction** | Instruction assisted by a computer | Conveying information<br>Individualized instruction | Trainees work at their own pace<br>Trainees at different sites can be trained without travel<br>Trainees spend less classroom time, presentation and practice individually | Expensive<br>Time-consuming to develop properly | Evaluate costs and benefits of choice carefully.<br>Use full capabilities; avoid mimicking structure of traditional stand-up instruction.<br>Make visually appealing. |
| One-on-one instruction | Student is individually assisted by the instructor | Individualized instruction<br>Remediation<br>Guided practice | Trainees can learn at their own pace<br>Individual areas of difficulty can be dealt with very effectively | Expensive<br>Time-consuming | Use on an as needed basis<br>Maintain guidelines about when, where, and how long<br>Avoid favoritism<br>Avoid compromising situations |

## SAMPLE ACTION PLAN

The three most important things I learned in this course were:

- ________________________________________
- ________________________________________
- ________________________________________

People, things, and processes that will support me as I use my new skills (implementing new processes, applying new concepts):

________________________________________

________________________________________

People, things, and processes that may be obstacles to my using my new skills (implementing these new processes, applying these new concepts):

________________________________________

________________________________________

When I return to work, I will:

____ Schedule a meeting with my supervisor to discuss what I learned in this course.

____ Share my course materials with my supervisor.

____ Share my course materials with co-workers whose support I need.

____ Schedule an hour to review the course materials one month from today.

____ Schedule an hour to review this action plan three months from today and address any new unforeseen obstacles.

Other things that I can do to directly address obstacles to using what I have learned in this course:

________________________________________

________________________________________

## PREPARING TO TEACH

1. **Know the scope of the course.** Know what is covered and what is not. If you get questions outside the scope of the course, you will usually want to discuss them outside class to keep from losing uninterested class members.

2. **Know the depth of the course.** Know to what level of complexity each topic is developed. You want to be sure you are prepared to go into the appropriate amount of depth in your lecture and examples.

3. **Know the flow of the presentation.** You want to appear prepared and avoid getting into a side discussion now of a topic that is going to come up later when it will make more sense.

4. **Know the purpose of all the visuals.** Never say "I don't know what the person who designed this had in mind, but..."

5. **Estimate the timing** of each lecture, exercise or workshop.

6. **Work through each exercise** so it is fresh in your mind when you present it to the class and so you can be sure the solutions are correct. It is much easier to supervise an exercise in class when you know just what the participants are encountering.

7. **Do all the exercises.** This will help you to be sure everything will work in the environment where you are teaching, and so the details will be fresh in your mind.

8. **Anticipate questions, technical difficulties.**

9. **Make sure that the Instructor Guide matches the Participant Manual.**

## MINI-PRESENTATION CHECKLIST

Presenter: ____________________________

Subject: ____________________________

**Introduction**

- ___ Drew in the audience
- ___ Covered background information, if necessary

**Body of Presentation**

- ___ Made eye contact
- ___ Maintained open posture
- ___ Used movement and gestures appropriately
- ___ Spoke in understandable, clear tones
- ___ Delivery was poised and suited the topic
- ___ Material was logically organized
- ___ Stressed key points

**Summary**

- ___ Summation and closure were effective

What were this presenter's strengths?

Where might this presenter improve?

# TRAINING MEDIA REFERENCE

## Printed Materials

Let's look at two categories of printed materials: references and activity handouts.

**References.** Reference materials include instructor-provided *supplemental readings*. These can be distributed either prior to or during class. It is important to remember that as an instructor, you should choose reference materials that are directly relevant to information covered in class. Providing a frame of reference and/or highlighting specific learning outcome to be gained from the supplemental reading is critical.

*Job Aids* are designed to make required information easily accessible on the job. Job aids are particularly helpful as reminders for information or processes needed on a sporadic basis.

**Activity Handouts.** A wide variety of printed materials can be used to support classroom activities and enhance learning. *Case studies* are handed out as part of an exercise, and contain a synopsis of information used as the basis for a decision or analysis activity. *Study guides* direct students to important topics or provide needed information.

*Checklists* can be used during activities to provide students with criteria for evaluation. For example, during a practical exercise, students can be required to perform a specific task under the same conditions as a final test. A checklist can be provided detailing each step and performance standards. For this course, instructor trainees will use a checklist for preparing to instruct during their lesson presentations.

**Graphic Elements.** Pictures or graphics should directly pertain to the text they illustrate and, as stated, should be placed as near the related text as possible. Visuals should enhance understanding by communicating more effectively than words allow, such as a set of scales to describe the concept of "balance." If a concept could be best conveyed with a chart or graph, determine essential information, and note relationships between the parts. Keep visuals simple to avoid confusing your message, and direct attention to them with concise captions or questions in the text.

**Text Elements.** The most legible typefaces are sans serif styles. The size of the lettering is crucial when designing displays to be read from a distance. A common rule of thumb is to make lowercase letters one-half of an inch high for every ten feet. Instructors should take into account the projection factor for overhead transparencies or slides, and design accordingly.

## Presentation aids

**Transparencies.** Transparencies are probably the most widely-used teaching aid. They can be used to project either pictures or words, and are very effective for highlighting the main points of your lecture. They are usually easy for everyone to see, and they may be used without dimming the lights.

When designing transparencies, refer to lesson objectives and determine the most important content in order to target elements that should be emphasized. Decide exactly what the verbal message must communicate and try to be as concise as possible, yet still be understood. Avoid unnecessary "bells and whistles" such as three dimensional effects, especially if they make the material harder to read. Use lines and boxes to organize and divide the screen. A design element, such as a particular border or icon, or certain color combinations, used repetitively on successive transparencies/slides, creates unity and adds polish to the entire presentation.

Instructors should be aware of how long it will take an average viewer, unfamiliar with the content, to read the entire visual, and display it accordingly. Another option is to provide students with the visual in their printed materials.

**Charts/posters.** Charts/Posters are usually used to present complicated diagrams, to highlight a few main points, or to motivate and persuade. They are readily made, or procured, and can be displayed indefinitely, allowing students easy access for as long and often as necessary. Because charts and posters can be displayed indefinitely, their content can be more complex than the screen design for transparencies. For example, a labelled rendering of the human heart could be posted in the classroom.

Posters are often used to motivate and persuade. The use of asymmetrical arrangements, bold colors, eye-catching, simple pictures and straightforward text is most effective.

Unfortunately, charts and posters can become outdated or lose impact; therefore, this medium is particularly useful to present stable material.

**Slides (35 mm).** Slides (35 mm) can be used like transparencies to project either words or pictures, and produce excellent results with full color photographs. They require less actions to use than transparencies, since the projector does all the work. One disadvantage is that the lights must be dimmed.

**Flipcharts.** Flipcharts are included under prepared and spontaneous media because flipchart pages can be used either way, or in combination. One disadvantage of flipchart use is that the instructor must turn away from the class while writing. However, prior to class, the instructor can fill in major headings, draw boxes for a simple flow chart, or write out a sentence, leaving blanks. Later, during class, he/she can label the steps in the flow chart or fill in the blanks based on student input.

## Presentation aids (cont'd)

**Film/video.** Films which are brief and pertinent to the subject matter provide a pleasant change of pace for the class. A significant drawback is the "prepackaged" nature of films. The content may not entirely dovetail with course concepts. Additionally, the lights must be dimmed and, if the film is lengthy, the audience may tend to lose energy, or even to fall asleep. Availability, cost, and use of equipment are also considerations.

**Simulation/props.** For practical exercises, props are an essential learning tool. Equipment that allows the students to experience, as closely as possible, actual on-the-job conditions is ideal. the use of props is especially appropriate for EMS instruction. Emergency Medical Technicians (EMTs) use many different pieces of equipment on the job. When students practice on actual or simulated equipment, mastery of skills increases. As an instructor, allow time for your students to practice with props.

**Computer-based programs.** Computer programs can be used to create screens for display, much like transparencies. Graphics, such as pie- and flow- charts, and the text and graphic elements common to transparencies can be easily created at a keyboard, stored as files, and then displayed to larger screens. Full color photographs can be scanned in, digitized, and stored as files, as well.

**Presentation software.** Software packages enable instructors to quickly and easily compile text, graphics, and pictures into an on-line presentation. Transitional devices, such as screen wipes, pushes, and fades, add sophisticated touches that enhance delivery. These presentations can be displayed on computers or through LCD display panels.

**LCD display panel.** An LCD display uses an overhead projector and an *LCD display panel* which connects to a computer. You show your presentation, which consists of electronic files instead of transparencies, via the computer. It is transmitted through the LCD display and projected in color. Digital files facilitate the rapid updating and reordering of material, and they can be transmitted electronically to remote locations. Digital images can be converted into a variety of forms, including hard copy, video, and CD-ROM, in addition to being pulled into a graphic or document file. However, this medium requires skills that may need to be trained or outsourced.

## HOW TO DESIGN TRANSPARENCIES

- Horizontal formats fit the size of the projected area best.
- Visual ideas should be communicated with pictures whenever possible. Use diagrams, charts, graphs, and pictures. If you have difficulty incorporating the picture and text, consider projecting just the picture, and using the board or flipchart to convey text.
- Confine your message to a single concept and use a simple, uncluttered design.
- A good rule of thumb is six words per line and six lines per transparency.
- Use key words as headlines to help the audience remember each point.
- Use letters at least 3/16-inch high. Check readability by laying the transparency on a white piece of paper on the floor. If you can read it from a standing position, the audience should be able to read it when projected.

## TIPS FOR OVERHEAD PROJECTION

- Use the same size frame for all of your transparencies.
- Tape a guide on the projector platform so that each image projects onto the same screen area
- Switch off the projector when you have finished referring to a particular transparency. This will shift the audience's attention back to you.
- Review the transparencies before the lesson to ensure they are in order and none are missing.
- Store transparencies in three-hole punch slip covers, in order, in a three-ring binder. Then just open the binder on the table next to the projector for easy access.
- Plan ways to add meaningful details to the transparency during projection. This adds spontaneity to the presentation.
- Reveal information one line at a time by placing a sheet of paper under the transparency.
- To present a complex idea in stages, layer up to four transparencies, one at a time.
- Lay pointers directly onto the transparencies. Any elevation will put the pointer out of focus and any slight hand movement will be greatly exaggerated on the screen.

## HOW TO OPERATE AN LCD PANEL

### Instructions for Set Up

- Position personal computer and overhead projector on the same study table of projection cart, or on adjacent tables or carts
- Place LCD panel on the overhead projector stage
- Be sure the power switch on the LCD panel is set in the OFF position
- Plug a power supply into the LCD panel and electrical outlet
- Connect computer to LCD panel. (see LCD panel instruction manual for specifics; the connection may require special cords)

### Operation

- Turn LCD power switch on
- Adjust LCD panel for best image
- Focus overhead projector on the projection screen
- Whatever appears on the computer monitor can now be projected onto the screen
- Although you can write on the LCD panel with water-based markers, covering it with clear acetate will protect the unit

## SUCCESSFUL SLIDE PRESENTATIONS

- Make certain your slides are in sequential order and right side up. Here's how:
    - ☐ Arrange in order and number sequentially.
    - ☐ Take the slides and hold it as it will be seen on the screen: right side up with the letters running left to right.
    - ☐ Place a spot (or number) on the bottom left corner.
    - ☐ This spot is referred to as the thumb spot. When you place the slide in the projector (upside down), your thumb will be on top of the spot.
- Use words on title frames to cue your audience to upcoming subject matter.
- Prepare in advance to illuminate your notes after the room lights are dimmed, if necessary.
- Limit verbal commentary to less than a minute, unless the visual is complex.
- Prepare a gray or black slide as a placeholder for lecture portions during your presentation, rather than holding an irrelevant slide on the screen.
- Consider including music to create a mood and capture attention.
- Begin and end with a black slide.
- Use a remote control device to advance slides. This allows you to stand to the side, maintain some eye contact with the audience, and keep an eye on the slides.

## TIPS FOR VIDEO AND FILM PRESENTATIONS

- Check the lighting, seating, and volume control to be sure that everyone can see and hear the presentation.
- Prepare students by briefly reviewing the lesson objectives related to the topic of the presentation.
- List the main points on the board before you start.
- Highlight major points after the presentation by adding them to the list.
- Remember that a smaller, brighter image is better than a large dim one. Move the projector closer to the screen or cover the windows with paper if necessary.
- Cue up the film or video so that the first image the audience sees is the title of opening scene.

## TROUBLESHOOTING

| EQUIPMENT | PROBLEM | POSSIBLE CORRECTION |
|---|---|---|
| Overhead Projector | No light after flipping switch | 1. Be sure projector is plugged into an electrical outlet<br>2. Turn the switch all the way on. Many overheads have a three-position switch: on, off, and fan.<br>3. If lamp is burned out, switch to spare lamp within projector if it has this feature. Otherwise, you will need to replace the lamp. Be sure to use a lamp of the same wattage (too high a wattage can cause overheating). Do not handle the lamp while it is hot. Avoid touching the new lamp with bare fingers; this could shorten its life.<br>4. Switch may be defective. If so, replace it. |
| | Dark edge with light in center of image | The fresnel lens is upside down. Turn it over if you know how; if not, have a qualified specialist do it. |
| | Dark spot on area of screen | The lamp socket within the projector needs adjustment. The task is best done by a trained audiovisual technician. |
| | Dark spot on screen or failure of lens to focus despite all adjustments of focus control | After determining that it is not simply a matter of dirt on the lens or improper use of the focus control, check for a warped fresnel lends. This lens is plastic and can become warped from excessive heat, usually caused by the fan not running properly. Have a qualified specialist repair the fan or thermostat and replace the fresnel lens. |

| EQUIPMENT | PROBLEM | POSSIBLE CORRECTION |
|---|---|---|
| LCD Panel | No image on LCD panel | 1. Adjust contrast<br>2. Check computer for instructions on obtaining image |
| | Image appears but is not centered | 1. Check LCD panel instructions<br>2. Adjust centering or frequency |
| | Flickering image or missing lines on LCD panel | 1. Check all connections to be sure they are correct and secure<br>2. Adjust stability or frequency |
| | Intermittent appearance of image | 1. Check all connection to be sure they are correct and secure<br>2. Check equipment setup |
| | Rolling waves in image | 1. Check equipment setup<br>2. Try another overhead projector<br>3. Adjust stability or frequency |
| | Contrast of display panel not uniform | 1. Focus overhead projector<br>2. Adjust contrast<br>3. Use lower-wattage overhead projector |
| | Test pattern only | 1. Check all connections to be sure they are correct and secure<br>2. Refer to instructions to be certain computer is connected properly |

| EQUIPMENT | PROBLEM | POSSIBLE CORRECTION |
|---|---|---|
| **Slide Projector** | Can't find power cord | Look for a built-in storage compartment |
| | No power after plugging in | If you are sure the outlet is live, check the circuit breaker on the slide projector |
| | Fan runs but lamp does not light | Some projectors have separate switches for "Lamp" and "Fan" or a two-stage switch for these two functions. Make sure all switches are properly set. Then check for burned out lamp. If neither of these is the problem, have technician check out the projector. |
| | Image not level | Most slide projectors have an adjustment knob on one of the rear feet. Use the knob to raise or lower the side. |
| | Slide is distorted | The lenses may be out of alignment or broken. Often they can be adjusted easily by aligning them correctly in their slots. |
| | Slide mounts begin to warp | For plastic black-and-white- mounts, check to see that white side of mount is facing the lamp. If the dark side is facing the lamp, a buildup of heat can cause the mount to warp (or even melt). |
| | Slide image upside down or backwards | Remove the slide and reverse it. |
| | Slide jams in gate | 1. Manually remove the slide.<br>2. Jamming can be avoided by not placing bent slides in the tray. Plastic mounts have a tendency to warp; cardboard mounts fray; glass mounts may be too thick for the slide compartment of the tray. For this reason, jamming is more likely to occur with narrow slide compartments. |

# SAMPLE LESSONS

## EVOC: Legal Aspects of Ambulance Operation

## EMT-BASIC: Initial Assessment

**COURSE:** EMERGENCY VEHICLE OPERATOR COURSE (AMBULANCE): NATIONAL STANDARD CURRICULUM

**MODULE A:** Ambulance Operation: The Basics

**LESSON 2:** **Legal Aspects of Ambulance Operation**

**LENGTH:** 1.5 Hours

**COURSE GOAL:** To provide ambulance operators with the knowledge and skills to operate their vehicles so that their vehicle, equipment, crew, and patients will be delivered safely and efficiently and the safety of the public will be assured during all phases of the delivery of Emergency Medical Services (EMS) involving the ambulance

**MODULE GOAL:** To provide ambulance operators with the knowledge and skills to safely and efficiently operate an ambulance in both nonemergency and emergency modes

**LESSON GOAL:** **To provide participants with knowledge of the federal, state, and local laws and of how to apply the laws when operating an ambulance**

**PERFORMANCE OBJECTIVE(S):**

- Identify types of laws that apply to ambulance operation
- Identify how specific laws apply to ambulance operation

**INSTRUCTIONAL AIDS:**

ICON LEGEND
(Those used in this lesson are highlighted)

| 📄 | 🖥 | Q&A | 📋 | ? | 🚑 |
|---|---|---|---|---|---|
| Appendix | Show Overhead | Question and Answer Period | Use Flipchart | Ask Question | Local Requirements |

🖥

1. Types of Regulations
2. Policies Working Together
3. Due Regard for Safety
4. True Emergency Situation
5. Negligence
6. Abandonment
7. Good Samaritan Provision
8. Patient's Rights

| | |
|---|---|
| **INSTRUCTIONAL EQUIPMENT:** | Overhead projector and screen<br>Transparencies<br>Flipchart and markers |
| **APPENDIX:** | Appendix A, Job Aid - Area Motor Vehicle Operation Guidelines |

Training Tips for: Lesson 2: Legal Aspects of Ambulance Operations

Tip 1. Use the forms in Appendix A. Get copies of the state and local statutes, county and city ordinances and regulations. Give each participant a copy.

Tip 2. Develop examples that are appropriate for your organization. Don't leave any doubt as to what is right or wrong. If possible get an attorney or law enforcement official to assist you with preparing the examples for your organization. They could also help in presenting the lesson.

Tip 3. For most organizations, when in doubt call the dispatcher.

Tip 4. It may be possible to get some audio tape from the 911 operations center that would have real examples of ambulance crews asking the dispatcher for advice about a specific incident or reporting their actions.

## INTRODUCTION

As an ambulance operator, you are responsible for the safe and efficient transportation of your patients and crew. At the same time, you must look out for the safety of the public. The very nature of your job requires you to work with others during a time of crisis and with this comes certain risks. You need to be aware that at all times while performing your job, you are being held "legally accountable" for your actions.

This lesson highlights some of the legal aspects--laws, issues, and guidelines--surrounding the performance of your duties.

## DEFINING THE LAW

Let's first talk about some of the types of regulations covering emergency vehicle operation and how the regulations guide the decisions you make while performing your job.

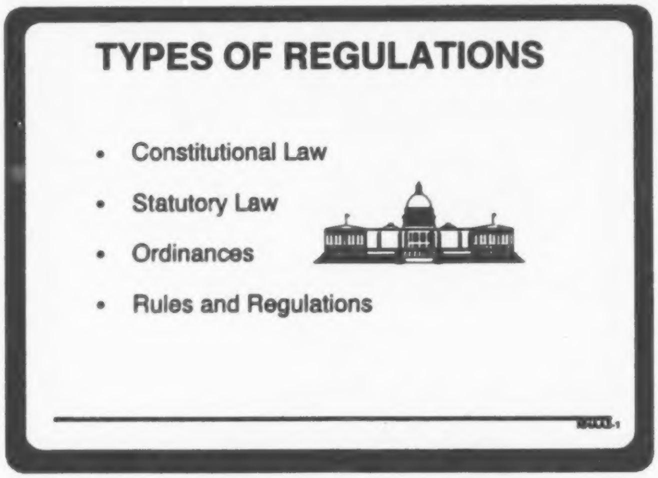
### Types of Regulations

There are several types of regulations that tell us how to conduct emergency vehicle operation. These regulations are for all types of emergency vehicles including ambulances.

Instructor Notes

Presentation

**Types of Regulations** **1:**



## TYPES OF REGULATIONS

- Constitutional Law
- Statutory Law
- Ordinances
- Rules and Regulations

Constitutional laws come from the U.S. Constitution. The Constitution guarantees the rights of the individual. These laws explain patients' rights before, during, and after transport.

Statutory laws come from legislative acts. Each state has laws or statutes that tell us how to operate emergency vehicles. The laws vary from state to state. For example, the state Motor Vehicle Code for each state tells us laws about traffic regulations. The code may dictate exceptions to these laws for ambulance operators, such as special procedures for proceeding through red traffic lights or parking in a no parking zone.

Ordinances are guidelines enacted by a governing municipal body or its agent. These guidelines usually include city or county codes. For example, in some cities, the use of bright headlights is not permitted.

Rules and regulations are guidelines enacted by an agency that have the force of law. The rules and regulations are intended to provide more information about statutory laws. These are often referred to as the organizational policies and procedures or Standard Operating Procedures (SOP). For example, an organization may have specific guidelines about when to use sirens.

### Understanding the Regulations

There are things about emergency vehicle operation laws that you need to know. You need to know how the laws work and when you are exempt from doing what the law says to do.

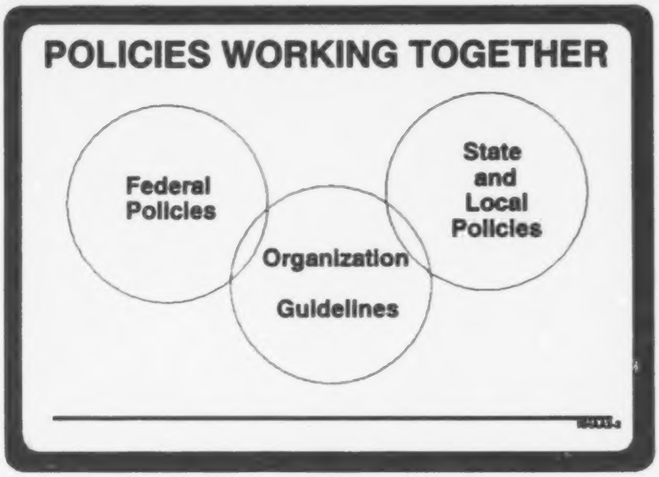
With so many regulations telling us how to operate emergency vehicles, you must know which law applies in a given situation. You may feel like there may be a conflict of policy about how you do your job. Here are some suggested guidelines for EMS ambulance operators:

> All organizational policy should incorporate the principles of state laws, local ordinances, rules, and regulations into guidelines for the ambulance operator.

Instructor Notes

Presentation

**Policies Working Together**



POLICIES WORKING TOGETHER

This means that all organizational policies and procedures should include and must not contradict federal, state, and local laws concerning the ambulance operation under all conditions. Your organization's policies may be formal or informal, but all policies should be in writing. This can provide protection from liability issues. As an operator, you must know your organization's policies.

Let's see what some of the local policies are concerning ambulance operation. We will discuss what makes up these policies in more detail later in the lesson.

| Instructor Notes | Presentation |
|---|---|

**local List**
**organization SOPs**
**and other guidelines**

There are times when you will be exempt from certain guidelines listed in the regulations. As part of your job, you are required to make decisions concerning the operation of your vehicle. Good training provides you with the knowledge and ability to make appropriate decisions when faced with an emergency situation. Knowing ahead of time what the law says does not apply in the situation is important. Keep the following three principles in mind when approaching the idea of exemptions:

1. Ambulance operators are subject to all traffic regulations unless a specific exemption is made in the state or local statutes.
2. Exemptions are legal only in the emergency mode.
3. Even with an exemption, operators can be found criminally or civilly liable if involved in a crash.

Some examples of exemptions to laws include proceeding through red lights/stop signs at controlled intersections, parking in a no parking zone, or violating traffic flow and turning procedures.

Q&A

What is meant by "specific exemption"?

[*Answer: A specific exemption is a statement which appears in the statutes and specifies an exception to the rule such as: "The operator of an authorized emergency vehicle may park in a no parking zone as long as the operator does not endanger life or property."*]

**Scenario**

**Have the participants read the scenario and write their response. Discuss responses as a group.**

Let's apply what we have just learned about the types of laws and exemptions to the laws.

Your state has a specific exemption for emergency vehicles proceeding through an intersection with a red signal light or stop sign. The exemption reads, "Emergency vehicles may proceed through an intersection with a red light signal or stop sign if the vehicle is brought to a complete stop, proper clearance is observed, and the vehicle proceeds through the intersection with caution."

During a run, you are following behind another emergency vehicle responding to an emergency call. You are approaching the intersection when you notice a red light. The other emergency vehicle stops, checks to see the intersection is clear, and then proceeds through the intersection. You then follow right behind the other vehicle through the light. Was your action within the law? Why?

*[Answer: No. Even though the first vehicle did meet the requirements of the law, your vehicle must also come to a complete stop, check for proper clearance, and then proceed with caution. No two emergency vehicles may proceed through the intersection at one time.]*

# Appendix I
# Test/Answer Key

## MODULE A TEST
### Ambulance Operation: The Basics

DIRECTIONS: Read each test item. Select the response which best answers the question or completes the statement.

1. Driving to an emergency scene, the ambulance operator approaches a controlled intersection with a red light. The operator stops at the red light, checks for clearance, and then proceeds through the light with caution. Which law is the operator complying with?

    A. True Emergency
    B. Negligence
    C. Abandonment
    D. Due Regard for Safety

2. An ambulance operator just arrived at the scene of a medical emergency. Which of the following describes the appropriate communication action the operator should take?

    A. No radio report required
    B. Dispatch, Unit 42; we've arrived at the scene
    C. Dispatch, 42; our 10-20 is the accident scene
    D. Harry, you there? This is Bob; uh! we're here; we'll call when we leave

3. What would be the effect of putting too many people into the ambulance?

    A. If maximum payload is exceeded, the operator will have to prepare a written report on the circumstances
    B. Would increase momentum which would make stopping vehicle more difficult
    C. Would have no effect as long as the EMT has sufficient room to continue basic life support on the patient
    D. Would have no effect because ambulance engine has sufficient horsepower

4. Which inspections and maintenance is the Ambulance Operator responsible for performing?

   A. Operator not responsible for inspecting or maintaining vehicle
   B. Full check and preventive maintenance
   C. Quick check, full check, and maintenance for which the operator has been trained and authorized to perform
   D. Quick check and that maintenance which is required during a run

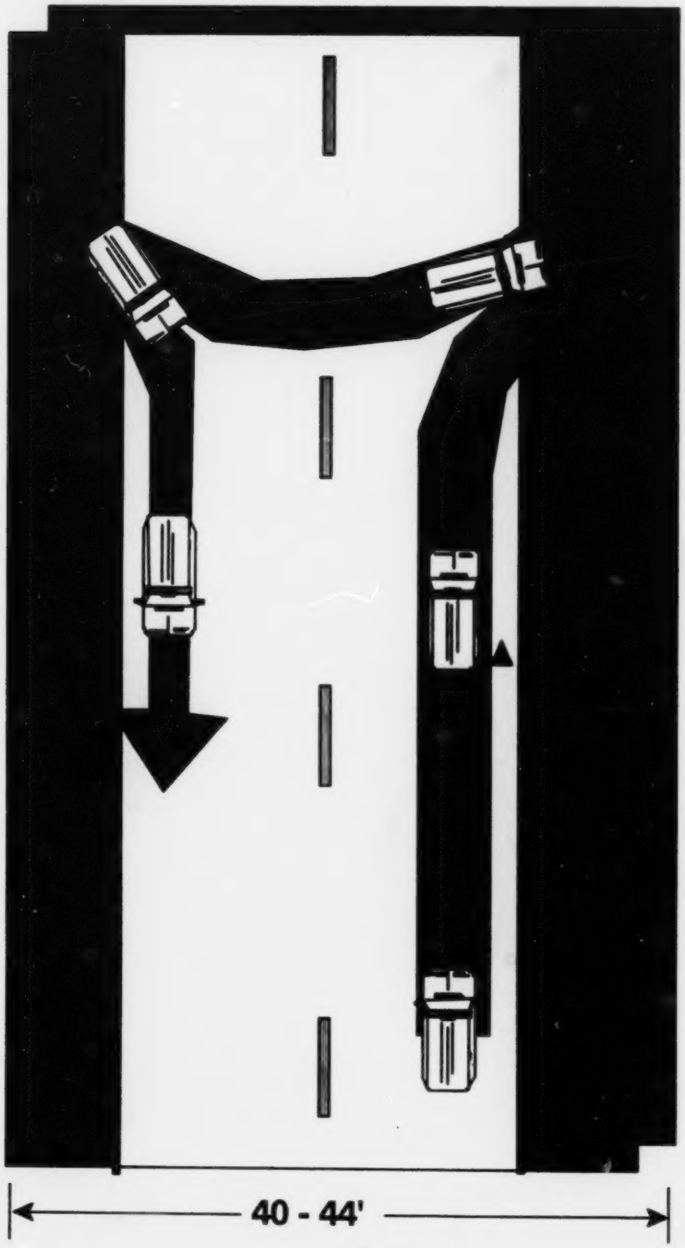
5. A multi-car crash has been reported. The primary consideration in selecting a route to the scene is--

   A. speed
   B. safety
   C. directions given by reporting party
   D. destination medical facility

6. When driving defensively and following the 2-4-12 rule, the operator will--

   A. be confident that all other drivers see the light and hear the siren and grant the operator the right of way
   B. maintain safety cushion around ambulance and drive 12 seconds ahead of the vehicle
   C. maintain 12 second spacing behind vehicle in front
   D. maintain two car lengths between the ambulance and the car ahead when in the city and four car lengths when on a interstate highway

# Three-Point Turn



# Three-Point Turn

## Purpose:

To develop the coordination of acceleration, turning, judgment of road width, and signaling.

## Procedure:

Check traffic. When clear, brake and turn to come to stop with front wheels on right shoulder. Begin backing and turning steering wheel to left. Stop when rear wheels are on left shoulder. Steer to the right and begin to accelerate. Move into right lane and continue forward.

## Instructor:

1. Explains purpose of exercise and key factors of the exercise.
2. Demonstrates exercise at moderate speed.
3. Demonstrates exercise at required speed.

## Participant:

1. Assumes proper driving position; seat, mirrors, seat belt.
2. Enters course at speed determined by instructor.
3. Checks rear traffic and signals for a stop at least 100 feet in advance.
4. Brings vehicle to a stop at approximately a 15-degree angle from the center of the road.
5. Begins backing turning the wheel slowly for the first 5 feet.
6. Steers counter clockwise until rear wheels barely hit the shoulder.
7. Moves forward into the right lane.
8. Negotiates the course smoothly.
9. Keeps steering movements constant and even.
10. Maintains 9 - 3 hand position.
11. Exits the course at the direction of the instructor.

## Three-Point Turn Exercise Rating

Participant's name Date Vehicle make/number

|  |  | Practice Exercises |  |  |  |
|---|---|---|---|---|---|
|  |  | 1 | 2 | 3 | 4 |
| A. | Entered course correctly................ | ☐ | ☐ | ☐ | ☐ |
| B. | Maintained required speed.............. | ☐ | ☐ | ☐ | ☐ |
| C. | 9 - 3 hand position (going forward). | ☐ | ☐ | ☐ | ☐ |
| D. | Controlled acceleration.................. | ☐ | ☐ | ☐ | ☐ |
| E. | Steering control........................... | ☐ | ☐ | ☐ | ☐ |
| F. | Accelerator, steering coordination.... | ☐ | ☐ | ☐ | ☐ |
| G. | Smooth acceleration..................... | ☐ | ☐ | ☐ | ☐ |
| H. | Foot movement........................... | ☐ | ☐ | ☐ | ☐ |
| I . | Use of brakes............................ | ☐ | ☐ | ☐ | ☐ |
| J . | Signaled intention....................... | ☐ | ☐ | ☐ | ☐ |
| K. | Checked mirror........................... | ☐ | ☐ | ☐ | ☐ |
| L. | Turned head.............................. | ☐ | ☐ | ☐ | ☐ |

Number of cones hit_____ _____ _____ _____

Reaction time was adequate. YES NO

Vehicle remained under control at all time. YES NO

Describe negative actions or attitudes.

______________________________________________

______________________________________________

Failed to complete exercise because______________________________

______________________________________________

All requirements were met. YES NO

GENERAL REMARKS:

Instructor's signature______________________________Date______________

I have seen the completed form and have been given an explanation of my performance and rating.

Participant's signature______________________________Date______________

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-2.1 Summarize the reasons for forming a general impression of the patient.(C-1)
3-2.2 Discuss methods of assessing altered mental status.(C-1)
3-2.3 Differentiate between assessing the altered mental status in the adult, child and infant patient.(C-3)
3-2.4 Discuss methods of assessing the airway in the adult, child and infant patient.(C-1)
3-2.5 State reasons for management of the cervical spine once the patient has been determined to be a trauma patient.(C-1)
3-2.6 Describe methods used for assessing if a patient is breathing.(C-1)
3-2.7 State what care should be provided to the adult, child and infant patient with adequate breathing.(C-1)
3-2.8 State what care should be provided to the adult, child and infant patient without adequate breathing.(C-1)
3-2.9 Differentiate between a patient with adequate and inadequate breathing.(C-3)
3-2.10 Distinguish between methods of assessing breathing in the adult, child and infant patient.(C-3)
3-2.11 Compare the methods of providing airway care to the adult, child and infant patient.(C-3)
3-2.12 Describe the methods used to obtain a pulse.(C-1)
3-2.13 Differentiate between obtaining a pulse in an adult, child and infant patient.(C-3)
3-2.14 Discuss the need for assessing the patient for external bleeding.(C-1)
3-2.15 Describe normal and abnormal findings when assessing skin color.(C-1)
3-2.16 Describe normal and abnormal findings when assessing skin temperature.(C-1)
3-2.17 Describe normal and abnormal findings when assessing skin condition.(C-1)

3-2.18 Describe normal and abnormal findings when assessing skin capillary refill in the infant and child patient.(C-1)
3-2.19 Explain the reason for prioritizing a patient for care and transport.(C-1)

## AFFECTIVE OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-2.20 Explain the importance of forming a general impression of the patient.(A-1)
3-2.21 Explain the value of performing an initial assessment.(A-2)

## PSYCHOMOTOR OBJECTIVES

At the completion of this lesson, the EMT-Basic student will be able to:

3-2.22 Demonstrate the techniques for assessing mental status.(P-1,2)
3-2.23 Demonstrate the techniques for assessing the airway.(P-1,2)
3-2.24 Demonstrate the techniques for assessing if the patient is breathing.(P-1,2)
3-2.25 Demonstrate the techniques for assessing if the patient has a pulse.(P-1,2)
3-2.26 Demonstrate the techniques for assessing the patient for external bleeding.(P-1,2)
3-2.27 Demonstrate the techniques for assessing the patient's skin color, temperature, condition and capillary refill (infants and children only).(P-1,2)
3-2.28 Demonstrate the ability to prioritize patients.(P-1,2)

## PREPARATION

Motivation: The EMT-Basic will encounter patients who require emergency medical care. It is important for the EMT-Basic to identify those patients who require rapid assessment critical interventions, and immediate transport.

Following the initial assessment, the EMT-B will use information obtained during this phase with the appropriate history and physical examination.

Prerequisites: BLS, Preparatory, and Airway.

## MATERIALS

AV Equipment: Utilize various audio-visual materials relating to patient assessment. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met.

EMS Equipment: Exam gloves, airway management equipment.

## PERSONNEL

Primary Instructor: One EMT-Basic instructor knowledgeable in patient assessment.

Assistant Instructor: The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable about patient assessment.

Recommended Minimum Time to Complete: One hour

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## PRESENTATION

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### Declarative (What)

I. General Impression of the Patient
  A. Definition
    1. The general impression is formed to determine priority of care and is based on the EMT-Basic's immediate assessment of the environment and the patient's chief complaint.
    2. Determine if ill, i.e., medical or injured (trauma). If injured, identify mechanism of injury.
    3. Age
    4. Sex
    5. Race
  B. Assess patient and determine if the patient has a life threatening condition.
    1. If a life threatening condition is found, treat immediately.
    2. Assess nature of illness or mechanism of injury.

II. Assess Patient's Mental Status. Maintain Spinal Immobilization if Needed.
  A. Begin by speaking to the patient. State name, tell the patient that you are an emergency medical technician, and explain that you are here to help.
  B. Levels of mental status
    1. Alert
    2. Responds to Verbal stimuli.
    3. Responds to Painful stimuli.
    4. Unresponsive - no gag or cough

- III. Assess the Patient's Airway Status.
  - A. Responsive patient - Is the patient talking or crying?
    - 1. If yes, assess for adequacy of breathing.
    - 2. If no, open airway.
  - B. Unresponsive patient - Is the airway open?
    - 1. Open the airway. Positioning is patient, age, and size specific.
      - a. For medical patients, perform the head-tilt chin-lift.
        - (1) Clear
        - (2) Not clear - Clear the airway.
      - b. For trauma patients or those with unknown nature of illness, the cervical spine should be stabilized/immobilized and the jaw thrust maneuver performed.
        - (1) Clear
        - (2) Not clear - Clear the airway.
- IV. Assess the Patient's Breathing.
  - A. If breathing is adequate and the patient is responsive, oxygen may be indicated.
  - B. All responsive patients breathing <24 breaths per minute or <8 breaths per minute should receive high flow oxygen (defined as a 15 LPM nonrebreather mask).
  - C. If the patient is unresponsive and the breathing is adequate, open and maintain the airway and provide high concentration oxygen.
  - D. If the breathing is inadequate, open and maintain the airway, assist the patient's breathing and utilize ventilatory adjuncts. In all cases oxygen should be used.

- E. If the patient is not breathing, open and maintain the airway and ventilate using ventilatory adjuncts. In all cases oxygen should be used.

V. Assess the Patient's Circulation.

- A. Assess the patient's pulse.
  - 1. The circulation is assessed by feeling for a radial pulse.
    - a. In a patient one year old or less, palpate a brachial pulse.
    - b. If no radial pulse is felt, palpate carotid pulse.
      - (1) If pulseless, medical patient $>12$ years old, start CPR and apply automated external defibrillator (AED).
      - (2) Medical patient $< 12$ years old, start CPR.
      - (3) Trauma patient, start CPR.
- B. Assess if major bleeding is present. If bleeding is present, control bleeding.
- C. Assess the patient's perfusion by evaluating skin color and temperature.
  - 1. The patient's skin color is assessed by looking at the nail beds, lips and eyes.
    - a. Normal - pink
    - b. Abnormal conditions
      - (1) Pale
      - (2) Cyanotic or blue-gray
      - (3) Flushed or red
      - (4) Jaundice or yellow
  - 2. Assess the patient's skin temperature by feeling the skin.
    - a. Normal - warm
    - b. Abnormal skin temperatures
      - (1) Hot
      - (2) Cool
      - (3) Cold
      - (4) Clammy - cool & moist
  - 3. Assess the patient's skin condition. This is an assessment of the amount of moisture on the skin.
    - a. Normal - dry
    - b. Abnormal - moist or wet
  - 4. Assess capillary refill in infant and child patients.
    - a. Normal capillary refill is less than two seconds.
    - b. Abnormal capillary refill is greater than two seconds.

VI. Identify Priority Patients.

- A. Consider:
  - 1. Poor general impression
  - 2. Unresponsive patients - no gag or cough
  - 3. Responsive, not following commands
  - 4. Difficulty breathing

        5. Shock (hypoperfusion)
        6. Complicated childbirth
        7. Chest pain with BP <100 systolic
        8. Uncontrolled bleeding
        9. Severe pain anywhere
    B. Expedite transport of the patient. Consider ALS back up.

VII. Proceed to the appropriate focused history and physical examination.

## APPLICATION

### Procedural (How)

1. Review airway patency, breathing and oxygen delivery.
2. Review methods of assessing mental status.
3. Demonstrate obtaining radial, carotid, and brachial pulses.
4. Show assessment and control of major external bleeding.
5. Demonstrate assessment of skin color, temperature and capillary refill.

### Contextual (When, Where, Why)

Perform initial assessment on all patients after assuring scene and personal safety. If the scene is safe and the environment permits, perform the assessment prior to moving the patient. The initial assessment is a rapid means of assessing patient condition and priorities of care.

## STUDENT ACTIVITIES

### Auditory (Hear)

1. Students should hear recordings of various patient situations to listen for clues concerning the general impression.
2. Students should hear normal and abnormal airway noises.
3. Students should hear breathing.

### Visual (See)

1. Students should see audio-visual aids or materials of various patients situations.
2. Students should see breathing while an initial assessment is being performed.
3. Students should see appropriate landmarks for assessing pulses.
4. Students should see examples of major bleeding.
5. Students should see normal skin color and condition.
6. Students should see how to control major bleeding.
7. Students should see the flow chart from Appendix I.

### Kinesthetic (Do)

1. Students should practice establishing mental status on programmed patients (fellow students) with various altered mental statuses.
2. Students should practice airway opening techniques on manikins and each other.
3. Students should practice assessing breathing.
4. Students should practice assessing pulses.
5. Students should practice assessing for major bleeding.
6. Students should practice assessing skin color, temperature and condition.
7. Students should practice assessing capillary refill.
8. Students should practice recording assessment findings.
9. Students should use the flow chart from Appendix I.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments, e.g., quizzes, verbal reviews, handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-Basic students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

## ENRICHMENT

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

## APPENDIX G

The following remediation sheet should be completed after every class for individual students or groups of students having difficulty with knowledge, skills, and/or attitude. The primary instructor or an assistant instructor should work with the individual or group as soon as possible to assure that they achieve success in the program.

## EMT-Basic National Standard Curriculum
## Remediation Sheet

| | |
|---|---|
| **Date:** | **Student:** |
| **Area of Difficulty:** | |
| | |
| | |
| | |
| **Action Plan:** | |
| **Completed:** | |

| | |
|---|---|
| **Date:** | **Student:** |
| **Area of Difficulty:** | |
| | |
| | |
| | |
| **Action Plan:** | |
| **Completed:** | |

| | |
|---|---|
| **Date:** | **Student:** |
| **Area of Difficulty:** | |
| | |
| | |
| | |
| **Action Plan:** | |
| **Completed:** | |

## APPENDIX F

The following enrichment lesson sheets should be copied and used as needed to assist with augmenting the core curriculum.

These sheets are designed to be used as a template to assure that added materials may be presented in similar format and style to the other lessons. These sheets may be added to any of the lessons in the core curriculum.

## OBJECTIVES

### OBJECTIVES LEGEND

C = Cognitive P = Psychomotor A = Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

### COGNITIVE OBJECTIVES

At the completion of this lesson, the EMT-B student will be able to:

- 
- 
-

### AFFECTIVE OBJECTIVES

- 
- 
-

### PSYCHOMOTOR OBJECTIVES

- 
- 
-

## PREPARATION

Motivation:

Prerequisites:

## MATERIALS

AV Equipment: Utilize various audio-visual materials relating to the ____________________. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meets the needs of the program. Materials should be edited to assure the objectives of the curriculum are met.

EMS Equipment:

## PERSONNEL

Primary Instructor:

Assistant Instructor:

Recommended Minimum

Time to complete:

## PRESENTATION

Declarative (What)
(Usually in outline form)

## APPLICATION

### Procedural (How)

1.

2.

3.

### Contextual (When, Where, Why)

1.

2.

3.

## STUDENT ACTIVITIES

### Auditory (Hear)

1.

2.

3.

Visual (See)

1.

2.

3.

Kinesthetic (Do)

1.

2.

3.

## INSTRUCTOR ACTIVITIES

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

## EVALUATION

| | |
|---|---|
| Written: | Develop evaluation instruments e.g. quiz, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson. |
| Practical: | Evaluate the actions of the EMT-B students during the role play, practice or other skill stations, to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson. |

## REMEDIATION

Identify students or groups of students that are having difficulty with this subject content. Complete remediation sheet from the instructor's guide.

# STUDENT PRESENTATION EVALUATION FORM

Presenter: ______________________

Subject: ________________________________

| Strongly Agree | Agree | Disagree | Strongly Disagree | |
|---|---|---|---|---|
| | | | | 1. Lesson objectives were made clear to students |
| | | | | 2. Lesson introduction created interest and established the need to know |
| | | | | 3. All needed supplementary teaching/learning items were ready and organized |
| | | | | 4. Instructor maintained proper position for all students to see presentation |
| | | | | 5. Aids were well-planned, well-developed, and used appropriately |
| | | | | 6. Vocabulary was at appropriate level |
| | | | | 7. The instructor regularly checked with students to see if they were on target |
| | | | | 8. Information was presented in an organized format |
| | | | | 9. Skill demonstration was presented in a logical step-by-step sequence |
| | | | | 10. Appropriate teaching method(s) was (were) selected |
| | | | | 11. The instructor's delivery was poised, effective and geared to the topic |
| | | | | 12. Instructor stayed on the subject |
| | | | | 13. Summation and closure were effective |

14. Lesson was too long (     )
too short (     ) for content

15. What were this instructor's strengths?

16. Where might this instructor improve?

## EMS Instructor Training Program—End of Lesson Evaluation

Name of lesson: ______________________________

1. Please rate the following by checking the appropriate box.

| | EXCELLENT | GOOD | AVERAGE | POOR | VERY POOR |
|---|---|---|---|---|---|
| Objectives matched content | | | | | |
| Depth of information | | | | | |
| Sequence of content | | | | | |
| Opportunities for discussion | | | | | |
| Relevance of activities | | | | | |
| Clarity of graphics/visual aids | | | | | |
| Format of Student Guide | | | | | |
| | **EXCELLENT** | **SUFFICIENT** | **INSUFFICIENT** | | |
| Instructor guidance | | | | | |
| Amount of practice | | | | | |
| Number of activities | | | | | |
| | **JUST RIGHT** | **TOO SLOW/LONG** | **TOO FAST/SHORT** | | |
| Pace of training | | | | | |
| Length of the lesson | | | | | |

2. If you answered poor, very poor, or insufficient to any of the above, please explain why.

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3. On the back of this sheet, please feel free to write any other comments you have regarding this lesson.

# COURSE EVALUATION

PURPOSE: It is our objective to present a useful and effective training course. You are the final authority on whether that objective has been met. Your completion of this form, therefore, will play an important part in our future planning. Please do not feel bound to limit your remarks to questions on this form. Your comments on any aspect of the course will be appreciated.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Course** | **INSTRUCTOR TRAINING COURSE** | **Dates** | | | | |
| **RESPONSES** (Check the response closest to your opinion) | | Strongly Agree | Agree | Disagree | Strongly Disagree | Not Applicable |
| 1. Course material was | a. Well organized | | | | | |
| | b. Complete and appropriate | | | | | |
| | c. Readable (printed well) | | | | | |
| 2. Audio visual materials were: | a. Related to the course | | | | | |
| | b. Good quality | | | | | |
| | c. Sufficient in number | | | | | |
| 3. Course | a. Was a reasonable length | | | | | |
| | b. Was worth recommending to others | | | | | |
| | c. Contributed to my knowledge and skills | | | | | |
| | d. Accomplished announced purpose | | | | | |
| 4. Instruction | a. Subject was thoroughly covered | | | | | |
| | b. Course objectives were clear | | | | | |
| | c. Exercises were appropriate | | | | | |
| | d. Time in class was spent effectively | | | | | |
| | e. Participation was encouraged | | | | | |
| 5. Classroom | a. Was comfortable | | | | | |
| | b. Included a manageable number of students | | | | | |
| | c. Was appropriate for this course | | | | | |
| 6. Instructor | a. Was prepared for class | | | | | |
| | b. Stimulated my interest in subject area | | | | | |
| | c. Made course a worthwhile learning experience | | | | | |

Remarks

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## COURSE EVALUATION (Continued)

7. Overall instructor evaluation (Check your opinion)

| | | | | |
|---|---|---|---|---|
| a. Knowledge of the subject | ☐ excellent | ☐ good | ☐ fair | ☐ poor |
| b. Ability to teach | ☐ excellent | ☐ good | ☐ fair | ☐ poor |

8. Would you add or emphasize any subject matter areas in subsequent course sessions?

☐ No ☐ Yes, list these areas and give your reasons.

9. Would you delete or de-emphasize any subject-matter areas?

☐ No ☐ Yes, list these areas and give your reasons.

10. Other comments. Please provide any comments, either general or specific, that you would like to make relative to this course.

| | | |
|---|---|---|
| **Signature and Title** | **Organization** | **Date** |

# APPENDIX C

## INFORMATION RESOURCES

National Registry of EMTs
6610 Busch Blvd.
P.O. Box 29233
Columbus, OH 43229

National Association of Emergency Medical Technicians (NAEMTs)
102 W. Leake Streeet
Clinton, MS 39056
800/34-NAEMT

National Association of State EMS Directors (NASEMSD)
1947 Camino Vida Roble, Suite 202
Carlsbad, CA 92008

National Highway Traffic Safety Administration (NHTSA)
400 7th Street, S.W
Washington, D.C. 20590

Association for Education Communications and Technology (AECT)
1025 Vermont Avenue, N.W.
Washington, D.C.
202-347-7834

Association for Supervision and Curriculum (ASCD)
1250 N. Pitt St.
Alexandria, VA
(703) 547-9110

Education Resource Information Clearinghouse (ERIC)
7420 Fullerton Rd., Suite 110
Springfield, VA
1-800-443-ERIC

## EMS PUBLICATION ORDERING INFORMATION

To order DOT EMS publications, please call (202) 512-2250. Other available publications are:

- First Responder: National Standard Curriculum
- Ambulance Operator's Course: National Standard Curriculum, Instructor Guide
- Ambulance Operator's Course: National Standard Curriculum, Participant Guide
- EMT, Basic: National Standard Curriculum
- EMT, Intermediate: National Standard Curriculum, Course Guide
- EMT, Intermediate: National Standard Curriculum, Instructor's Lessons Plans
- EMT, Paramedic: National Standard Curriculum, Course Guide
- EMT, Paramedic: National Standard Curriculum, Instructor's Lessons Plans
- Emergency Medical Care: A Manual for the Paramedic in the Field
- Emergency Medical Care: A Manual for the Paramedic in the Field (Workbook)

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